STATE OF VERMONT
PUBLIC SERVICE BOARD

Docket No. 7596

Petition of Central Vermont Public Service Corporation ("CVPS") for a Certificate of Public Good pursuant to 30 V.S.A § 248 authorizing: the reconstruction of the CVPS Hewitt Road substation, including the replacement of structural steel; replacement of existing 46/12.47 kV 5.0/7.0 MVA transformer with a 7.5/10.5 MVA transformer; and associated upgrades including oil containment, bus work, breakers with microprocessor based relays, battery system, and a control house, in Bristol, Vermont

and

Docket No. 7597

Joint Petition of Central Vermont Public Service Corporation ("CVPS") and Vermont Electric Power Company, Inc. and Vermont Transco LLC ("VELCO") for a Certificate of Public Good pursuant to 30 V.S.A § 248 authorizing: the reconductoring of 3.9 miles of 46kV transmission line in Middlebury and Weybridge, Vermont; construction of a new 46 kV transmission line 5 miles in length in Weybridge and New Haven, Vermont; expansion of the CVPS Hewitt Road substation, including the installation of a 46kV 5.4 MVAR capacitor bank, in Bristol, Vermont; installation of new substation breakers at the VELCO Middlebury substation in Middlebury, Vermont; and installation of new substation breakers at the VELCO New Haven substation in New Haven, Vermont

Hearing at
Montpelier, Vermont
July 8, 2010

Order entered: 8/20/2010

PRESENT: Kurt Janson, Hearing Officer

APPEARANCES: Morris L. Silver, Esq.
for Central Vermont Public Service Corporation

Mark Sciarrotta, Esq.
for Vermont Electric Power Company, Inc.

Jeanne Elias, Esq.
Louise Porter, Esq.
for Vermont Department of Public Service

Judith Dillon, Esq.
for Vermont Agency of Natural Resources

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I. INTRODUCTION

These dockets involve two petitions requesting certificates of public good (individually a "CPG" and collectively "CPGs") under 30 V.S.A. § 248. Docket No. 7596 involves a petition filed by Central Vermont Public Service Corporation ("Central Vermont," "CVPS" or the "Company") on January 29, 2010, seeking authorization for the reconstruction of the CVPS Hewitt Road substation in Bristol, Vermont (the "Hewitt Road Project").

Docket No. 7597 involves a petition filed by CVPS on February 1, 2010, for the "Middlebury Reliability Project," which involves (1) the reconductoring of 3.9 miles of 46 kV transmission line in Middlebury and Weybridge, Vermont, (2) construction of a new 46 kV transmission line 5 miles in length in Weybridge and New Haven, Vermont, (3) expansion of the CVPS Hewitt Road substation, including the installation of a 46 kV 5.4 MVAR capacitor bank, in Bristol, Vermont, (4) installation of a new substation breaker, a new switch and associated relay equipment (in the control room) at the Vermont Electric Power Company, Inc. ("VELCO") Middlebury substation in Middlebury, Vermont, and (5) installation of new substation breakers at the VELCO New Haven substation in New Haven, Vermont. On March 11, 2010, an Amended Petition was filed in Docket No. 7597 to add VELCO as a co-petitioner for the Middlebury Reliability Project.

Together, the Hewitt Road Project and the Middlebury Reliability Project are hereinafter referred to as the "Middlebury Projects" or the "Projects." Proceedings to review the two Petitions have been consolidated to the extent possible, including a joint schedule and hearings.

The Hewitt Road Project is needed to resolve aging infrastructure concerns at the existing substation. This project also includes installation of a larger transformer to accommodate future load growth and to allow for the permanent transfer of load from the Weybridge 80 circuit load to reduce losses. The larger transformer will also allow for the transfer of additional Weybridge 80 circuit load during emergency and planned outages and improve fault current for the Hewitt Road 37 and 38 circuits.

The Middlebury Reliability Project is designed to increase reliability on the CVPS 46 kV transmission system in the Middlebury area. Much of the area is currently served by a radial line between CVPS's Middlebury Lower substation ("Middlebury Lower") and Weybridge substation,

and cannot withstand the loss of VELCO substation transformers in New Haven and Middlebury. The Middlebury Reliability Project will result in the connection of the radial line to a new source in New Haven, the addition of substation breakers in New Haven and a substation breaker in Middlebury, the addition of capacitors at the CVPS Hewitt Road substation, and the reconductoring of the existing 46 kV line between Middlebury Lower and Weybridge. These measures will substantially reduce the likelihood of severe undervoltage and service interruptions during substation and line contingencies.

The proposed Middlebury Projects, as conditioned by this Proposal for Decision, will enhance electric reliability for the area, will not result in any undue adverse impacts under the substantive criteria of 30 V.S.A. § 248(b), and will promote the general good of the state. Consequently, I recommend that the Board approve the Projects as conditioned below.

II. PROCEDURAL HISTORY

A consolidated Prehearing Conference in both dockets was held on March 18, 2010. Appearances were entered for CVPS, VELCO, the Department of Public Service (the "Department"), and the Vermont Agency of Natural Resources ("ANR").

A site visit and public hearing were held on April 21, 2010. At the public hearing, four members of the public spoke, with their comments focusing on potential visual impacts of the 46 kV transmission line on their properties.

No party sought to intervene in Docket No. 7596.

On April 29 and May 3, 2010, James Walsh and Polly Darnell each filed a motion to intervene in Docket No. 7597 on April 29 and May 3, 2010, respectively. These motions were denied in an Order issued May 13, 2010, in Docket No. 7597.

On May 20, 2010, I held a status conference. Also on May 20, CVPS filed Supplemental Testimony of Timothy J. Upton and Exhibit CVPS-JRF-18(Revised).

On July 1, 2010, CVPS filed a Memorandum of Understanding (the "MOU") among itself, the Department and VELCO. Appended to the MOU were: a form of Proposed Findings and Proposal For Decision, and Certificates of Public Good; a report entitled "Visual Resource Analysis: Observations and Recommendations," dated June 2010, prepared by the SE Group for

the Department; the Supplemental Testimony and Exhibits of Ryan C. Johnson; and CVPS's Indiana Bat Habitat Management and Mitigation Plan, dated June 18, 2010.

Pursuant to Paragraph 11 of the MOU, the parties have proposed that the Board issue a consolidated Order and CPGs in these dockets. I have adopted this proposal and, accordingly, have prepared a consolidated Proposal for Decision.

A consolidated technical hearing was held in both Dockets on July 8, 2010, at which the prefiled testimony, exhibits, and the MOU and attachments were entered into the record by stipulation. At the technical hearing, CVPS stated that it was modifying its proposal for use of a portable substation during construction activities at the Hewitt Road substation, and would be constructing a temporary substation instead of utilizing a portable one.

At the July 8 technical hearing I made a number of record requests to which CVPS filed responses on July 16 and 20, 2010. On July 22, 2010, the Department and ANR filed comments on CVPS's responses. No party objected to the admission of CVPS's responses, and I hereby admit them into the evidentiary record.

On July 23, 2010, the Department submitted its determination of consistency with the Vermont Electric Plan, pursuant to 30 V.S.A. § 202(f).

III. CVPS MOTION FOR PROTECTIVE ORDER

On February 1, 2010, when it filed its Petition seeking a CPG for the Middlebury Reliability Project, CVPS also filed a Motion for Confidential Treatment of Selected Prefiled Exhibits. The schedule for this proceeding was set to allow time for CVPS and the Department to attempt to reach agreement on CVPS's request for confidential treatment.

On June 24, 2010, CVPS filed a Substitute Motion for Confidential Treatment of Prefiled Exhibits, reflecting an agreement with the Department on the issuance of a protective order for Exhibit CVPS-7597-LRK-2. At the July 8, 2010, hearing, I raised some questions about the requested protective order and requested that CVPS provide further support for its request, including more specific explanation for why the various types of information should be placed under seal and an explanation of why information that apparently had been publicly released previously should now be confidential. I also requested that CVPS review the information to

determine whether its request was overly broad (for example, in redacting entire tables rather than individual elements of the tables). I also noted that CVPS had redacted information from another of its exhibits, CVPS-7597-JRF-21, but had not included that exhibit in its motion for a protective order.[1]

On July 16, 2010, CVPS filed a Supplemental Memorandum in Support of Its Motion for Confidential Treatment of Exhibit CVPS-LRK-2, and a Motion for Confidential Treatment of Confidential Exhibits CVPS-JRF-21 and CVPS-JRF-23. In its motions seeking confidential treatment of Exhibits CVPS-7597-LRK-2, JRF-21 and JRF-23, CVPS represents that the redacted information in the exhibits may constitute Critical Energy Infrastructure information ("CEII") as defined by FERC, and as such the Company would be required to take steps to keep the information confidential.[2]

In its Supplemental Memorandum, CVPS has scaled back the extent of the information in Exhibit LRK-2 for which it seeks confidential treatment. CVPS provides further explanation, in general terms, for why eight different types of information contained in Exhibit LRK-2 should be kept under seal. For example, CVPS has requested confidential treatment for "Descriptions of the size or capacity (including name plate ratings) of critical bulk system elements or interfaces," and provided as the supporting rationale, "To limit the public disclosure of bulk system element sizes or capacities."

CVPS also addresses the previous public disclosure of some of the information, acknowledging that an earlier version of Exhibit LRK-2 had been filed with the Board as part of CVPS's integrated resource plan ("IRP"). The Company contends that

> . . . unlike a traditional request for a protective order, a conclusion that the information may meet the definition . . . of [Critical Energy Infrastructure Information] now means that the Company must act to protect the confidentiality of the information on a forward going basis. As such, the fact that the information

1. *See* tr. 7/8/10 at 5–12.

2. CVPS is not seeking a Board determination that the redacted information actually constitutes CEII, but instead requests protection because the information may be CEII and, if so, CVPS would be required to take steps to maintain its confidentiality.

> sough to be protected may at one time have been subject to public disclosure does not relieve the Company of the duty to now seek to protect it from release.[3]

On July 22, 2010, the Department filed a letter in which it "reiterates its position that the public is best served by limiting the amount of information redacted in this proceeding." The DPS notes with approval that CVPS has reduced the amount of information that it seeks to place under seal, and that it has provided additional detail regarding the proposed redactions. However, the Department also asserts that "it would perhaps be even more helpful if CVPS were to create an index for each redaction that would indicate the specific rationale associated with each redaction."

I conclude that, to date, CVPS has not presented a sufficient basis to issue the requested protective order. The public's understanding and acceptance of Board decisions and the interests of public accountability are promoted by keeping open, to the greatest extent possible, the evidentiary basis for those decisions. Therefore, the Board "places a heavy burden on the party seeking confidentiality to justify that decision."[4] While CVPS has provided additional explanation in support of its requested redactions, and has reduced the extent of information that it seeks to keep under seal, I conclude that CVPS should provide a more specific basis to support its proposed redactions, including an explanation of why the specific information might constitute CEII.

Furthermore, I remain unpersuaded that information that CVPS previously filed in a public document—in fact, in an earlier version of the very document from which it now seeks to redact information—and that remains open to inspection in the Board's public files should be placed under seal in the current proceeding. While CVPS asserts that it is obligated to seek protection for information that it believes may be CEII, the Company has not pointed to any statute, regulation or legal precedent to support a conclusion that information that has been, and remains, open to public inspection should nonetheless be sealed if it is filed in a separate proceeding. This question is particularly relevant where, as is apparently the case here, the

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3. CVPS Supplemental Memorandum at 4.

4. Docket No. 7599, Order of 4/2/10 at 2.

previous public disclosure involved a substantially similar document, unless the current version of the document contains new or updated sensitive information.

Thus, I conclude that CVPS's request for a protective order should be denied, without prejudice. I recommend that the Board keep the information under seal pending a renewed or modified motion by CVPS that addresses the deficiencies noted above. I further recommend that the Board allow CVPS a period of 30 days from the date of the Board's order to file its renewed or modified motion, and that if a renewed or modified motion is not filed by that deadline, the subject information be removed from seal.

IV. FINDINGS

Based on the evidence of record and the testimony presented at the hearing, I hereby report the following findings to the Public Service Board ("Board") in accordance with 30 V.S.A. § 8.[5]

A. Overview of Project

1. CVPS is a duly organized public service corporation with a principal place of business at 77 Grove Street, Rutland, Vermont. Petitions at ¶ 1.

2. VELCO is a company defined by 30 V.S.A. § 201, with a principal place of business at 366 Pinnacle Ridge Road in Rutland, Vermont. Amended Docket No. 7597 Petition at ¶ 1.

3. As of July 2010, the Projects are estimated to cost a combined total of $5,361,034. The estimated costs for the various project components are as follows:

Hewitt Road Substation Rebuild: $807,490

Middlebury Reliability Project components:

Hewitt Road Substation Capacitor Bank: $422,490

VELCO New Haven Substation Breaker Additions: $433,309

VELCO Middlebury Substation Breaker Addition: $296,414

Weybridge Substation Load Break Switches: $133,719

5. Because this is a consolidated Proposal for Decision in two dockets, citations to the prefiled testimony and the exhibits include the docket number where necessary to avoid possible confusion.

Middlebury Lower Substation Rebuild: $1,432,612

Weybridge to New Haven 46 kV Transmission Line with Fiber: $1,340,000

46 kV Transmission Tie Switch at New Haven: $50,000

Middlebury Lower to Weybridge 46 kV Transmission Reconductoring: $445,000

Total for Middlebury Reliability Project: $4,553,544

CVPS Response to Hearing Officer Record Request, July 16, 2010, at 3–12; CVPS Supplemental Response to Hearing Officer Record Request, July 20, 2010, at 2–3.

4. The coordinated planning, permitting and construction of both Projects at the same time provides synergies that make it more cost effective to complete the Projects concurrently. Jones pf. Docket No. 7586 at 4.

Hewitt Road Project

5. The Hewitt Road Project will involve the reconstruction of the CVPS Hewitt Road substation in Bristol, Vermont, including replacement of structural steel, replacement of an existing 46/12.47 kV 5.0/7.0 MVA transformer with a 7.5/10.5 MVA transformer, and associated upgrades including installation of oil containment, bus work, breakers with microprocessor-based relays, battery system, and a control house. Docket No. 7596 Petition at ¶ 4; Jones pf. Docket 7596 at 3.

6. The existing Hewitt Road substation was constructed in 1968 as a double-circuit 12.47 kV distribution substation. The substation is fed from a radial 46 kV transmission line. The substation serves local distribution load and consists of one Gang Operated Airbreak ("GOAB") switch, one 5 MVA 46/12.47 transformer, and two 12.47 kV distribution circuits. Fiske pf. Docket No. 7596 at 2.

7. The existing Hewitt Road substation does not have oil containment for the transformer, nor does it have a control building. The existing distribution buswork spacing does not meet current clearance standards, and the existing ground grid does not meet current standards. The substation is not equipped with SCADA (Supervisory Control and Data Acquisition) control and monitoring. Fiske pf. Docket No. 7596 at 2.

8. As part of the Middlebury Reliability Project, CVPS proposes to install a new 26-foot-tall steel structure on the transmission side of the substation. The Hewitt Road Project includes installation of a GOAB and fuses on that structure to provide a takeoff for a new 7.5 MVA 46/12.47 kV transformer. Oil containment will be installed under the transformer, designed for approximately 150 percent of the transformer's oil volume. Fiske pf. Docket No. 7596 at 4.

9. The Hewitt Road Project includes the installation of two new 26-foot-tall steel bays on the distribution side to accommodate the installation of a GOAB, circuit breakers, breaker disconnects, fused cutouts, a station-service transformer, line-to-ground bus instrument transformers, line instrument transformers, and 12.47 kV bus work. Existing regulators will be reused, and microprocessor-based relaying and metering will be installed for the 12.47 kV distribution circuit. Fiske pf. Docket No. 7596 at 4.

10. The Hewitt Road Project also includes the construction of an 18-foot by 24-foot control building, 13 feet tall. The control building will house protection and control panels, a battery system, SCADA equipment, fiber communication equipment, AC/DC distribution panels, and other control devices. A Global Positioning System receiver antenna and a cell modem antenna will be mounted on the gable end of the building. Fiske pf. Docket No. 7596 at 3.

11. CVPS proposes to expand the fenced area at the Hewitt Road substation. The existing fenced area is 50 feet by 80 feet; the proposed expanded fenced area would be 120 feet by 120 feet. The expanded area is designed to accommodate a portable substation for further maintenance activities, and to allow the installation of the capacitor bank that is part of the Middlebury Reliability Project. Fiske pf. Docket No. 7596 at 2, 5; exh. CVPS-JRF-6.

12. During the reconstruction of the Hewitt Road substation, temporary substation facilities are required to serve the radial load that is otherwise served by the permanent substation. CVPS originally proposed to install a portable substation, which in turn would require a gravel pad and temporary access road which would both be removed after completion of construction. However, the intended portable substation is under repair and will not be available, and as a result CVPS now proposes to install a temporary substation at the site, utilizing the same gravel pad and temporary access road. CVPS's proposal does not include oil-containment facilities for

the temporary substation. Fiske pf. Docket No. 7596 at 5; tr. 7/8/10 at 41–42 (Fiske); exh. CVPS-JRF-9.

Middlebury Reliability Project

New 46 kV transmission line

13. The Middlebury Reliability Project will involve: the construction of a new 46 kV transmission line five miles in length in Weybridge and New Haven, Vermont; reconductoring of 3.9 miles of 46 kV transmission line in Middlebury and Weybridge, Vermont; expansion of the CVPS Hewitt Road substation, including the installation of a 46 kV 5.4 MVAR capacitor bank, in Bristol, Vermont; installation of a new substation breaker, a new switch and associated relay equipment (in the control room) at the VELCO Middlebury substation in Middlebury, Vermont; and installation of new substation breakers at the VELCO New Haven substation in New Haven, Vermont. Kirby pf. Docket No. 7597 at 1–2; Johnson pf. Docket No. 7597 at 3–12; Fiske pf. Docket No. 7597 at 1–2; exh. CVPS-7597- LRK-2.

14. The proposed new 3.9-mile 46 kV transmission line will run between the Weybridge substation and the VELCO New Haven substation. The line will be constructed completely on existing property or rights of way that CVPS or VELCO owns, largely within the right of way of an existing CVPS distribution line ("Line 4"). The existing Line 4 will be rebuilt along its existing centerline as an underbuild on structures shared with the new transmission line, except at the beginning and end of the transmission line and at two angle structures. Johnson pf. Docket No. 7597 at 3–6; Johnson supp. pf. Docket No. 7597 at 4.

15. As it leaves the Weybridge substation, the new transmission line will follow the existing Line 4 centerline and cross Otter Creek. At the Weybridge substation, the reconstructed Line 4 is proposed to be relocated so that it crosses Otter Creek at the same location as a second, existing distribution line. Line 4 will then turn north up Field Days Road, then turn onto Twitchell Hill Road to meet up with the new transmission line. Separating Line 4 from the transmission line for the Otter Creek crossing allows the new transmission crossing structures to be considerably shorter than would be necessary if Line 4 were co-located on the structures. Johnson pf. Docket No. 7597 at 5.

16. Shortly after the new transmission line with the Line 4 underbuild crosses Route 7 in New Haven, the two lines will separate. Line 4 will continue easterly down the existing distribution corridor to New Haven Village, while the transmission line will utilize an existing VELCO transmission right-of-way to the VELCO New Haven substation. Johnson pf. Docket No. 7597 at 5–6.

Reconductored 46 kV transmission line

17. The 3.9-mile Middlebury Lower to Weybridge 46 kV transmission line is the last section of the existing 6.5-mile radial transmission feed to the Middlebury area, and was constructed in 1948. When the new transmission line between the Weybridge and VELCO New Haven substations is complete, the existing 3.9-mile line becomes the "weak link" in the transmission loop. CVPS proposes to replace the existing #2 copper conductor with larger 477 ACSR conductor. There will be no changes to the alignment or pole locations. Johnson pf. Docket No. 7597 at 11–12; Upton pf. Docket No. 7597 at 23–24.

18. To accommodate the new, larger conductor, some of the existing structures will need to be replaced due to insufficient height or deterioration from age. Some structures will need an additional crossarm to support the larger conductor. A total of seven poles will be replaced, all in their existing locations. Pole heights will not increase by more than five feet at any location. Johnson pf. Docket No. 7597 at 11–12; Upton pf. Docket No. 7597 at 24.

Expansion of Hewitt Road substation

19. The Middlebury Reliability Project includes the proposed installation of a 5.4 MVAR capacitor bank at CVPS's Hewitt Road substation. The installation consists of one 46 kV capacitor switcher with pre-insertion resistors, three 46 kV fused disconnects, one 5.4 MVAR capacitor bank, one bay of 46 kV steel, and associated protective relaying. The capacitor switcher, capacitor bank, and steel bay will require concrete foundations. The new steel bay will be 18 feet wide, 16 feet deep, and 26 feet tall (not including a sixteen-foot lightning mast). The new bay is needed because the existing 46 kV support structure is not large enough to allow for

the installation of the capacitor-bank equipment. Fiske pf. Docket No. 7597 at 24–25; exh. CVPS-7597-JRF-26.

20. These proposed upgrades at the Hewitt Road substation will not fit within the existing fenced area. The new, larger fenced area will be 120 feet by 120 feet, enclosed by an eight-foot-high fence. Fence lighting will be installed for maintenance and emergency activities, and will be controlled by a switch. The existing ground grid will be enhanced to cover the expanded yard. Fiske pf. Docket No. 7597 at 25.

21. The capacitor switcher will be SCADA controlled. Because there is no communication equipment currently at the Hewitt Road substation, CVPS will install fiber optic equipment at the Hewitt Road substation and a new fiber optic cable on the 46 kV line between the Hewitt Road and VELCO New Haven substations. Fiske pf. Docket No. 7597 at 25.

22. A temporary substation is proposed to continue to serve customers during the work at the Hewitt Road substation. Fiske pf. Docket No. 7597 at 27; tr. 7/8/10 at at 41–42 (Fiske); exh. CVPS-JRF-9; see finding 12, above.

New breaker at VELCO Middlebury substation

23. As part of the Middlebury Reliability Project, the Petitioners propose to install, in the VELCO Middlebury substation, a new 46 kV vacuum circuit breaker including foundation, breaker disconnect switches, and breaker bypass switch. The purpose of the new breaker is to protect the 46 kV line segment between the VELCO Middlebury and CVPS Middlebury Lower substations. The proposed upgrades will fit within the existing substation fence. Fiske pf. Docket No. 7597 at 9–11.

New breakers at VELCO New Haven substation

24. As part of the Middlebury Reliability Project, the Petitioners propose to install, in the VELCO Middlebury substation, two new 46 kV vacuum circuit breakers with foundations and a 46 kV motor-operated airbreak switch with load-break capability. The Petitioners also propose to remove a bank breaker bypass switch. One of the new breakers will protect the 46 kV line segment between the VELCO New Haven and CVPS Middlebury Lower substations, and the

second will protect the 46 kV line segment between the VELCO New Haven and CVPS Hewitt Road substations. The proposed upgrades will fit within the existing substation fence. Fiske pf. Docket No. 7597 at 20–23.

Lay-down area

25. CVPS proposes to use the former VELCO New Haven substation site as a lay-down area during construction of the Middlebury Reliability Project. This proposed lay-down site is located off Route 17 in New Haven, adjacent to and about 500 feet northeast of the current VELCO New Haven substation. All that remains at the former VELCO New Haven substation site is a flat gravel surface approximately 200 feet by 200 feet. Johnson supp. pf. Docket No. 7597 at 1–2.

26. The lay-down area will be used to store materials that are needed for construction of the Middlebury Reliability project, such as poles, crossarms, and reels of conductor. CVPS will place storage trailers or containers at the lay-down area to store and secure smaller materials and supplies such as line hardware and insulators. A contractor job trailer may also be placed at the site. Johnson supp. pf. Docket No. 7597 at 2.

Weybridge and Middlebury Lower substations

27. In conjunction with the Middlebury Reliability Project, CVPS also plans to install sectionalizing equipment at the Weybridge substation in Weybridge, Vermont, and reconstruct and relocate the Middlebury Lower substation on Seymour Street Extension in Middlebury, Vermont. The Weybridge and Middlebury Lower substations are within the defined boundaries of hydroelectric projects subject to licenses issued by the Federal Energy Regulatory Commission ("FERC"). Fiske pf. Docket No. 7597 at 2–3; Upton pf. Docket No. 7597 at 6.

Discussion

As noted in the above finding, the work associated with the Middlebury Reliability Project also includes the installation of sectionalizing equipment at the Weybridge substation in Weybridge, Vermont, and the reconstruction and relocation of the Middlebury Lower substation on Seymour Street Extension in Middlebury, Vermont. These two substations are within the

boundaries of hydroelectric projects subject to FERC licenses. CVPS has not provided details for the work at these two substations as part of the petition and evidence in Docket No. 7597, and is not seeking approval under Section 248 for the work at the Weybridge and Middlebury Lower substations.[6] For purposes of clarity, unless expressly stated otherwise, the term "Middlebury Reliability Project" as used in this Proposal for Decision does *not* include the work at the Weybridge and Middlebury Lower substations.[7]

B. Section 248(b) Findings

(1) Orderly Development of the Region

[30 V.S.A. § 248(b)(1)]

28. The Projects will not unduly interfere with the orderly development of the region, with due consideration having been given to the recommendations of the municipal and regional planning commissions, the recommendations of municipal legislative bodies, and the land conservation measures contained in the plan of any affected municipality. This finding is supported by Findings 29 through 49, below.

29. The Middlebury Projects are located in four Vermont municipalities – Middlebury, Weybridge, Bristol, and New Haven – and will not conflict with any land conservation measures in the four municipal plans. The Middlebury Reliability Project involves upgrades to existing substation facilities, and the installation of a new transmission line in existing, in-use distribution and transmission corridors. Land uses in the four municipalities will be unchanged. The Hewitt Road Project involves reconstruction of an existing substation at the existing substation location. Upton pf. Docket No. 7597 at 5; Findings 5 and 13, above.

30. Work in Middlebury associated with the Projects includes the installation of a new breaker, a new switch and associated relay equipment (in the control room) at the VELCO Middlebury substation. This work will take place within the existing substation fence and will

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6. *See* MOU (exh. Joint-1) at 2 and parties' joint proposed Docket No. 7597 CPG (exh. Joint-1, Attachment 1).

7. Although the proposed work at the Webridge and Middlebury Lower substations is not before the Board for approval under Section 248, aspects of that work may be relevant to the Board's consideration of the overall compliance of the Middlebury Reliability Project with certain of the Section 248 criteria. Therefore, some of the findings below address aspects of the work at the Weybridge and Middlebury Lower substations.

not materially change the appearance of the facility. The remainder of the work in Middlebury, including the replacement of the CVPS Middlebury Lower substation, will take place within the project boundaries of a FERC-licensed hydro generation facility. Upton pf. Docket No. 7597 at 5–6; exh. CVPS-7597- JRF-9.

31. The Middlebury Town Plan contains an Air Quality Standard to "[s]upport actions that lessen greenhouse gas emissions." To reduce the greenhouse gas impacts of the Middlebury Reliability Project, CVPS will purchase and install vacuum breakers at the VELCO Middlebury substation, rather than the more commonly available Sulfur hexafluoride (SF6) breakers. Upton pf. Docket No. 7597 at 3.

32. Work in Weybridge associated with the Middlebury Reliability Project includes the reconductoring of an existing transmission line that connects the CVPS Middlebury Lower and Weybridge substations, including seven poles that will be replaced in their existing locations and that will not increase in height by more than five feet in any location. The remainder of the work in Weybridge, including the construction of approximately 750 feet of new 46 kV transmission line, will take place within the project boundaries of a FERC-licensed hydroelectric generation facility. Upton pf. Docket No. 7597 at 6, 24; exhs. CVPS-7597-TOU-2A and TOU-2B.

33. The Weybridge Town Plan, last updated in 1996, does not directly address transmission-line construction and maintenance. The Plan includes a goal to "[i]dentify and preserve significant historic structures, sites, or districts; known prehistoric archeological sites; and areas where prehistoric sites are likely to be found." The Plan includes several supporting policies, which recommend evaluation of known and potential historic sites with input from the Vermont Division for Historic Preservation ("DHP"). The Northeast Archaeological Resource Center conducted studies of historic resources in consultation with Scott Dillon of the DHP. The DHP has concluded that the project Middlebury Reliability Project will have no undue adverse impact on historic sites or properties provided that certain conditions are included in any CPG. Upton pf. Docket No. 7987 at 6-7; exhs. CVPS-7597-TOU-5, TOU-6, TOU-7, TOU-8, and TOU-11.

34. The 1996 Weybridge Town Plan includes a goal to "[r]etain the present amount (no net loss) of significant (Class One and Class Two) wetlands and the values and functions they serve. These values and functions include, but are not limited to, those listed in Vermont Wetland

Rules." The Plan contains several supporting policies, including "Ensure that new development is located and designed so that it will not impair the values and functions of important wetlands." The Middlebury Reliability Project has been designed to avoid and minimize wetland impacts, in consultation with ANR's Wetlands Office, and has received a Conditional Use Determination. Upton pf. Docket No. 7597 at 7; exh. CVPS-7597-TOU-11.

35. Work in New Haven associated with the Middlebury Reliability Project includes the construction of approximately five miles of new 46 kV transmission line connecting the CVPS Weybridge substation and the VELCO New Haven substation, and the addition of breakers at the VELCO New Haven substation. Upton pf. Docket No. 7597 at 7-8; exhs. CVPS-7597-TOU-3A, TOU-3B, TOU-3C, JRF-21.

36. The New Haven Town Plan speaks to a need for the following:

> . . . A system to discourage new public utility expansion, including, but not limited to, expanded/upgraded electric transmission facilities, that may have an adverse impact on viable agricultural operations and environmentally sensitive areas, which poses health risks to citizens, which poses threats to property or property values, or which degrades scenic corridors and existing aesthetics.

The Middlebury Reliability Project has been designed to avoid unnecessary impacts to agricultural operations, environmental resources, public health, and aesthetic resources. Upton pf. Docket No. 7597 at 8–9.

37. Work in Bristol associated with the Middlebury Reliability Project involves the addition of a 46 kV 5.4 MVAR capacitor bank at the CVPS Hewitt Road substation. The addition of the capacitor bank requires the expansion of the existing substation yard. Upton pf. Docket No. 7597 at 9; exh. CVPS-7597- JRF-25.

38. All work associated with the Hewitt Road Project will take place in the town of Bristol. Finding 5, above.

39. The Bristol Town Plan includes a policy to "[e]ncourage the provision of a safe and continuous electrical power supply to all areas in the Town that require it." The Middlebury Projects are designed to address regional reliability concerns and will allow for needed upgrades at the Hewitt Road substation. Upton pf. Docket No. 7597 at 9.

40. The Energy section of the Addison County Regional Plan includes the following goal and discussion:

That energy infrastructure and services do not cause undue adverse impact to the health and safety of residents or on the environmental quality of the Addison Region.

To meet this goal, it is our objective:

a. To fully utilize existing infrastructure and rights-of-way to meet the region's energy needs before additional infrastructure is built or new rights-of-way acquired.

b. For no large-scale energy generation or transmission facilities, which have as their primary purpose providing energy to markets outside the Addison Region, to be constructed or expanded in the region.

c. To consider all costs whether capital, environmental or health when evaluating the viability of both locally generated and imported energy sources.

d. For utilities and individuals seeking Certificates of Public Good for projects in the Addison Region to work with affected landowners, municipalities and the Addison Country Regional Planning Commission ("ACRPC") to develop appropriate aesthetic mitigation plans prior to filing their Act 248 applications.

e. To work toward the phasing out of fossil fuels and adopting cleaner energy solutions.

f. To co-locate energy transmission and distribution lines, telephone lines and cable lines in the same corridors on the same infrastructure, if feasible, and to coordinate the delivery of their services to reduce the aesthetic impacts of the services they provide.

g. For undergrounding of transmission and distribution lines, and if relevant, other service lines in or around the proposed corridor to be considered in the planning and siting of the line to reduce aesthetic impacts of the lines.

Upton pf. Docket No. 7597 at 10.

41. The Projects will be located entirely within existing transmission and distribution rights of way and existing substation properties. In order to properly consider environmental as well as capital costs, project planning and design sought to avoid and minimize environmental impacts, through resource inventories and in collaboration with ANR and the U.S. Army Corps of Engineers ("ACOE"). CVPS contacted the ACRPC, the selectboards and planning commissions of all affected municipalities, and individual landowners along the proposed new transmission corridor at the earliest stages of project design for the Middlebury Reliability Project. The proposed 46 kV transmission line between Weybridge and New Haven will be co-located in existing distribution and transmission rights of way for its entire length, on a single set of poles where feasible. The Hewitt Road Project will take place within the limits of the substation

expansion required under the Middlebury Reliability Project, in accordance with policies expressed in the regional plan, and in a manner that avoids unnecessary impacts to the landscape and regional scenic character. Upton pf. Docket No. 7597 at 10-11; Upton pf. Docket No. 7596 at 4.

42. Under Health and Safety Concerns, the Addison County Regional Plan states:

> Power lines, electrical wiring and appliances all produce electric and magnetic fields (EMFs). Electric and magnetic fields have different properties. Electric fields are produced by voltage and are easily shielded by conducting objects. Any appliance that is plugged in produces electric fields whether or not it is turned on and using power. Magnetic fields are produced by current and are not easily shielded. An appliance must be turned on and using power to produce a magnetic field. Electric fields reduce in strength with increasing distance from the source.
>
> There has been considerable debate on and research into the potential impacts of EMFs on human health. Due to their greater strength, the fields generated by transmission lines have been the focus of much of the debate. In 1999, the National Institute of Environmental Health Sciences (NIEHS) completed a report on the potential human health affects associated with EMFs. The NIEHS concluded that exposure could not be declared entirely safe because of a weak link research had found between EMF exposure and increased risk of leukemia, especially in children. In its report, the NIEHS recommended that the power industry continue its current practice of siting power lines to reduce exposures and continue to explore ways to reduce the creation of magnetic fields around transmission and distribution lines without creating new hazards.

Upton pf. Docket No. 7597 at 12.

43. With regard to EMF exposure, the Board has previously adopted a policy of "prudent avoidance," which involves the "adoption of policies that limit magnetic field exposure whenever this can be done for a small investment of money and effort." (Docket No. 7373, Order of 2/11/09 at 64-65). In the present case, using the most cost-effective route for the proposed transmission line (i.e., following an existing distribution right-of-way through mainly open and very sparsely developed land) is also the most effective option for avoiding the introduction of additional areas of EMF exposure, and thus complies with the prudent-avoidance policy. Upton pf. Docket No. 7597 at 11–12.

44. Under Aesthetic Concerns and Scenic Character, the Addison County Regional Plan states:

> The Addison Region's landscape is characterized by scenic vistas with long views over rolling farm fields and forested areas to Lake Champlain and the Adirondack Mountains to the west. To the east, the view is of the forested foothills and peaks of the Green Mountains. Given the long, open viewsheds from many locations within the region and the importance many residents and visitors attach to Vermont's rural character, towers, turbines, lines and cleared rights-of-way have significant visual impact.
>
> Electricity infrastructure is often a highly visible feature in the landscape, whether it be the profusion of poles and distribution lines in an historic downtown, a line of 75-foot tall transmission lines through farm fields, a substation ringed with chain link and barbed wire fence alongside the road or a 150-foot tall wind turbine on a ridgeline. When there are plans to construct new or expand existing infrastructure, the infrastructure should be sited to respect the scenic character of the landscape and the aesthetic concerns of the citizens of the region.

Upton pf. Docket No. 7597 at 12.

45. The project will be constructed entirely within existing transmission and distribution corridors and at existing substation sites, in accordance with policies expressed in the regional plan, and in a manner that avoids unnecessary impacts to the landscape and regional scenic character. The new 46 kV transmission line will be consolidated with an existing distribution line on a single set of poles; poles were sited in a manner that allows for safe, reliable construction specifications with an appropriate balance between the numbers and heights of poles. Upton pf. Docket No. 7597 at 12–13.

46. The Middlebury, Weybridge, New Haven, and Bristol Selectboards, the Middlebury, Weybridge, New Haven, and Bristol Planning Commissions, and the Addison County Regional Planning Commission were provided with a description of the Middlebury Reliability Project's purpose, nature, and extent, along with location maps. CVPS arranged two public meetings at the ACRPC, and invited the selectboards and planning commissions of all affected municipalities to attend. Participating towns and the ACRPC expressed a preference for avoiding and minimizing impacts to natural, cultural, and scenic resources through careful design and in consultation with appropriate state and federal agencies. Based on the public meetings, none of the municipal or regional governmental entities recommended specific changes to the project design as proposed. Upton pf. Docket No. 7597 at 13.

47. On November 13, 2009, CVPS provided its 45-day notice to all selectboards and planning commissions in affected municipalities, and to the ACRPC, pursuant to 30 V.S.A. Section 248(f) and PSB Rule 5.402(A), for both of the Projects. Upton pf. Docket No. 7597 at 13–14.

48. Upon receipt of the 45-day notice, the Weybridge Planning Commission requested that CVPS attend its December meeting. At that meeting, the commission expressed concern over the impacts of proposed transmission crossing of Otter Creek, which is located within the FERC project boundaries for Weybridge Station, and the proposed distribution line relocation along Field Days Road. Specifically, the commission stated that depending on final design and pole heights, the construction could have adverse impacts on aesthetics and local property values in the surrounding Quaker Village area. The planning commission requested additional information on pole construction types and height of poles and conductors at the proposed transmission crossing relative to the existing facilities, which information CVPS provided on January 11 and January 15, 2010. Upton pf. Docket No. 7597 at 14.

49. The Weybridge Planning Commission has not provided any comments or recommendations to the Board with respect to the Projects. *See* record, generally.

Discussion

Under Section 248(b)(1), the Board must determine whether a proposed project will unduly interfere with the orderly development of the region, giving due consideration to the land conservation measures in the local and regional plans and the recommendations of the affected local and regional planning commissions and legislative bodies. The Board received no such recommendations,[8] and as described in the above findings, the proposed Projects have been designed in a manner that is consistent with the relevant provisions of the local and regional plans. Furthermore, the Projects will be located entirely within existing rights of way and existing substation properties, and will not change any land uses in the involved municipalities.

8. Also, none of the affected municipal or regional governmental bodies requested to intervene in these proceedings.

For these reasons, as more fully set forth in the above findings, I conclude that the proposed Project will not unduly interfere with the orderly development of the region.

(2) Need for Present and Future Demand for Service

[30 V.S.A. § 248(b)(2)]

50. The Projects are required to meet the need for present and future demand for service which could not otherwise be provided in a more cost-effective manner through energy conservation programs and measures and energy efficiency and load management measures. This finding is supported by findings 51 through 64, below.

51. The Hewitt Road Project is necessary to address aging infrastructure concerns. The existing transformer is 41 years old. The existing circuit breakers on the 37 circuit are 41 years old and the circuit breakers on the 38 circuit are 42 years old. CVPS's asset-management study concludes that the failure rate increases dramatically for substation equipment over 40 years old. Jones pf. Docket 7596 at 3–4.

52. The larger transformer planned for the Hewitt Road substation is needed to accommodate future growth and to allow for the permanent transfer of approximately 600 kVA on the Weybridge 80 circuit load for loss savings (34 kW of loss savings at peak). The larger transformer will allow for the transfer of additional Weybridge 80 circuit load during emergency and planned outages and improve fault current for the Hewitt Road 37 and 38 circuits. The existing 5.0/7.0 MVA transformer that feeds the 37 and 38 circuits has minimal capacity available for future load growth and backup capabilities. Jones pf. Docket 7596 at 3.

53. The electric system serving the Middlebury/New Haven area is presently exposed to long periods when line or transformer failures could result in widespread outages for many thousands of customers, including residences, public buildings, and commercial facilities. Such outages will be more likely to occur at times of system stress, either during extremely cold weather or during extremely hot weather. Additional growth in demand will increase the likelihood and scope of such outages. Kirby pf. Docket 7597 at 20.

54. The Middlebury Reliability Project is designed to increase reliability on the CVPS

46 kV transmission system in the Middlebury area, much of which is currently served by a radial line between the Middlebury Lower and Weybridge substations and is unable to withstand the loss of VELCO substation transformers in New Haven and Middlebury. The connection of the radial line to a new source in New Haven – along with the addition of substation breakers in New Haven and a substation breaker in Middlebury, the addition of capacitors at the CVPS Hewitt Road substation in Bristol, and the reconductoring of the existing 46 kV line between Middlebury Lower and Weybridge – will substantially reduce the likelihood of severe undervoltage and service interruptions during substation and line contingencies. Kirby pf. Docket 7597 at 3–8; exh. CVPS-7597-LRK-2

55. The Middlebury Reliability Project will (1) improve service quality for present and future demand on facilities that are integral to the existing system, (2) increase short- and long-term reliability and flexibility on the existing system without requiring new properties or rights of way, and (3) expand opportunities for future demand-side management efforts and distributed generation. Johnson pf. Docket No. 7597 at 14–15; Kirby pf. Docket 7597 at 12–13; exh. CVPS-7597-LRK-2

56. The Middlebury Reliability Project will increase system flexibility such that further sequential transmission reconfigurations are made possible. A second-step option to connect VELCO's Middlebury substation to the Huntington and Beldens hydro-electric units owned by Vermont Marble Power Division of OMYA, Inc. was considered for the Project, but was not pursued because a cost-sharing agreement could not be reached. The Project will allow for the second-step option in the future without requiring changes to the Project. Kirby pf. Docket 7597 at 12–13; exh. LRK-2 Docket No. 7597; tr. 7/8/10 at 94–96 and 100–101 (Kirby).

57. VELCO's *2009 Vermont Long Range Transmission Plan* specifically notes that the loss of the Middlebury transformer as a recognized deficiency in need of correction, and mentions the proposed Middlebury Reliability Project. Kirby pf. Docket 7597 at 5.

58. The radial paths in Middlebury and New Haven area were found to have the highest priority for remediation of all CVPS radial transmission lines. Kirby pf. Docket 7597 at 6.

59. The Middlebury Reliability Project is projected to significantly reduce the exposure durations (the period of time during which the area's load is high enough to pose a threat to

reliability if a specific loss should occur) for the Middlebury and New Haven transformer outages. At present-day load levels, the exposure durations for loss of the Middlebury and New Haven transformers are projected to drop from 86 percent and 49 percent to one percent and zero percent, respectively. After ten years of projected load growth (assuming an annual load growth of 1.2 percent), these exposure durations are projected to be two percent and zero percent, respectively. Kirby pf. Docket 7597 at 6; exh. CVPS-7597-LRK-2

60. The exposure duration for outages on the line between Middlebury Lower and Weybridge substations is presently 100 percent because the existing supply to Middlebury Lower Substation and points beyond is radial with no redundancy. The Middlebury Reliability Project is projected to reduce this exposure duration to six percent, and after ten years of projected load growth, the exposure duration would be 16 percent. Kirby pf. Docket 7597 at 7; exh. LRK-2 Docket 7597.

61. At present-day load levels, the improved reliability exposures will comply with CVPS's reliability criterion for subtransmission networks. The index requires the exposure duration for any single contingency to be no more that 10.4 percent for the Middlebury/New Haven 46 kV network system. After ten years of projected growth, the exposure durations for the Middlebury and New Haven transformers are projected to be in compliance, and the exposure duration for the line between Middlebury Lower and Weybridge Substations is projected to fall modestly out of compliance. The improved system in ten years would still be substantially more reliable than the existing system at current load levels. Kirby pf. Docket 7597 at 7-8; exh. LRK-2 Docket 7597.

62. The reliability issues addressed by the Middlebury Reliability Project cannot practicably be resolved by conservation, efficiency, or load management measures. A non-transmission alternative ("NTA") solution for the Middlebury Reliability Project was assessed using the NTA screening tool developed by the Vermont System Planning Committee. The assessment concluded that: (1) even without fully addressing technical feasibility or reliability equivalence to the alternative, a generation-only NTA would cost approximately four times as much as the best transmission alternative; and (2) the most optimistic demand-side management scenario, with no consideration of its societal or capital costs, will still render the NTA far more costly than the proposed transmission option. Kirby pf. Docket 7597 at 11.

63. The demand-side-management NTA for the Middlebury/New Haven system would only satisfy present-day demand. Future area load growth would require added increments of demand-side management and/or distributed generation, whereas the proposed transmission alternative will accommodate significant load growth without supplementation. Kirby pf. Docket 7597 at 11.

64. The Hewitt Road Project will achieve loss savings and increase reliability in a more cost-effective manner than could be expected through alternative measures. The only portion of the Project costs that can be deferred through load reduction is the incremental costs between the existing 5.0/7.0 MVA transformer and the proposed 7.5/10.5 MVA transformer, given that the age of the existing transformer requires that it be replaced. This incremental cost is approximately $57,500 based on 2007 purchase requisitions. Assuming demand-side management at a cost of $2,500 per kW, demand-side management would only allow for a load reduction of 23 kW at the same incremental capital costs as the larger transformer. The Project's ability to transfer load from Weybridge 80 to the Hewitt Road Substation will result in a load reduction of 34 kW. Jones pf. Docket 7596 at 5-6; tr. 7/8/10 at 23 (Jones).

(3) System Stability and Reliability

[30 V.S.A. § 248(b)(3)]

65. The Projects will not adversely affect system stability or reliability. The Projects will, instead, improve system stability and reliability. Kirby pf. Docket 7597 at 11; Jones pf. Docket 7596 at 4. This finding is further supported by findings 66 through 69, below.

66. Significant portions of the existing and projected load in the Middlebury area are served by radial transmission lines and are therefore subject to service interruptions and severe undervoltage during foreseeable contingencies. The area served by the Middlebury Reliability Project presents the highest risk anywhere on the CVPS subtransmission system as measured by the product of length of radial line exposure and average demand. Kirby pf. Docket 7597 at 3-6; exh. CVPS-7597-LRK-2

67. Based on the index used by CVPS to evaluate network reliability, the CVPS 46 kV system in the Middlebury/New Haven area is exposed to unacceptable levels of risk at present load levels. Kirby pf. Docket 7597 at 5.

68. The Middlebury Reliability Project will reduce reliability risks associated with the loss of substation transformers in Middlebury and New Haven and the line between the Middlebury Lower and Weybridge substations. Kirby pf. Docket 7597 at 6-8; exh. CVPS-7597-LRK-2

69. The Hewitt Road Project will improve system stability and reliability through the replacement of aging equipment. The Project's larger transformer will increase the system's ability to serve future load growth and increase flexibility to transfer load during emergency and planned outages. Jones pf. Docket 7596 at 4; Fiske pf. Docket 7596 at 5-6.

(4) Economic Benefit to the State

[30 V.S.A. § 248(b)(4)]

70. The Projects will result in an economic benefit to the state and its residents. This finding is supported by findings 71 through 74, below.

71. Both the Middlebury Reliability Project and the Hewitt Road Project will result in an economic benefit to the state and its residents. Jones pf. Docket No. 7596 at 5; Kirby pf. Docket No. 7597 at 11-12; exh. Joint-1 at ¶ 4.

72. Currently, the Middlebury Reliability Project area includes 22 MW of radially supplied load, which is vulnerable to a first contingency 100% of the time. The Middlebury Reliability Project's service area includes 6,517 residential customers. In addition, many of the customers in the Middlebury Reliability Project area are businesses that depend on reliable service for continued profitability and employment, including 1,115 commercial customers and 13 industrial customers. The Middlebury Reliability Project will address reliability issues for the area's residential, commercial, and industrial customers. The improvements will reduce undervoltage and increase reliability, thereby helping the area maintain, and potentially expand, economic activity, providing an economic benefit to the state and its residents. Kirby pf. Docket No. 7597 at 4, 12; tr. 7/8/10 at 173 (Kirby); exh. CVPS-7597-LRK-2.

73. The Hewitt Road Project will provide more reliable power with improved circuit configurations and enhanced load-transfer capabilities. The improvements will provide direct economic benefits to the state through loss savings and economic benefits for home businesses and a number of farms on the Weybridge 80 circuit that suffer financially from losses of power. The load transfer will result in loss savings at peak of approximately $160,000 over twenty years. Jones pf. Docket No. 7596 at 4-5; tr. 7/8/10 at 21-22 (Jones).

74. The total estimated cost of the Projects is $5,361,034. The Middlebury Reliability Project's estimated costs are $4,553,544, including construction at five different substations and the transmission line reconductoring and construction. The Hewitt Road Project's estimated costs are $807,490. Exh. CVPS-7597-LRK-2 at 10; CVPS Response to Hearing Officer Record Request at A2 (7/15/10); CVPS's Supp. Response to Hearing Officer Record Request (7/19/10).

Discussion - Economic Benefits

Pursuant to 30 V.S.A. § 248(b)(4), the Board must find that the proposed Project "will result in an economic benefit to the state and its residents" before issuing a certificate of public good. The Middlebury Reliability Project improvements will reduce undervoltage and contingency exposures for 22 MW of radially supplied load, which is vulnerable to a first contingency 100% of the time. The Hewitt Road Project will improve circuit configurations and provide enhanced load-transfer capabilities; the enhanced load-transfer capabilities, alone, will result in approximately $160,000 of loss savings at peak over twenty years. The Projects will increase reliability and, thus, reduce the potential economic costs associated with power losses for residential, commercial, and industrial customers. The increased reliability will also help the state maintain economic activity and allow future commercial and industrial expansions. For these reasons, I conclude that the proposed Project will result in an economic benefit to the state and its residents.

(5) Aesthetics, Historic Sites, Air and Water Purity, the Natural Environment and Public Heath and Safety

[30 V.S.A. § 248(b)(5)]

75. The proposed project will not have an undue adverse effect on aesthetics, historic sites, air and water purity, the natural environment, and public health and safety, subject to, and upon compliance with, the conditions set forth in the proposed order below. This finding is supported by findings 76 through 184, below, which give due consideration to the criteria specified in 10 V.S.A. § 1424a(d) and 10 V.S.A. § 6086(a)(1) through (8) and (9)(K).

76. Use of the former VELCO New Haven substation site as a lay-down area should not have any adverse impacts under the relevant Section 248 criteria. The site is an area that has been previously disturbed and covered with gravel, and that is set back from Route 17 and fairly well screened. Use of the lay-down area will not produce undue noise impacts, will not impose a burden on municipal services, and will involve truck traffic for only short and intermittent periods. Johnson supp. pf. Docket No. 7597 at 3.

(a) Public Health and Safety

[30 V.S.A. § 248(b)(5)]

77. The proposed Projects will not have an undue adverse impact on public health and safety. Upton pf. Docket No. 7596 at 5; Upton pf. Docket No. 7597 at 14.

(b) Water and Air Pollution

[10 V.S.A. § 6086(a)(1)]

78. The proposed Projects will not result in unreasonable water or air pollution. This finding is supported by findings 79 through 109, below.

79. The Projects do not involve road construction or excessive dust during construction. Construction will take place only during daylight hours, which will minimize the effects of noise at neighboring properties. With the exception of a short segment near the Pike Industries crushed stone facility in New Haven, almost no clearing will be required for the MRP. No burning will take place. Upton pf. Docket No. 7597 at 15; Upton pf. Docket No. 7596 at 6.

80. CVPS will install vacuum-style substation breakers for the Projects rather than breakers using SF6, a greenhouse gas, as an insulating medium. Upton pf. Docket No. 7597 at 16; Upton pf. Docket No. 7596 at 7.

81. CVPS proposes to construct the Hewitt Road Project during daylight hours, with the possibility of construction on weekends as well as weekdays. Upton pf. Docket No. 7596 at 5; tr. 7/8/10 at 26 (Upton).

Discussion - Air Pollution

To limit the possible impacts of construction noise on neighboring properties, CVPS has proposed to limit construction at the Hewitt Road substation to daylight hours. At the hearing, CVPS's witness agreed that construction could be restricted to be allowed only between 7:00 a.m. and 7:00 p.m. on weekdays, and between 9:00 a.m. and 7:00 p.m. on weekends and holidays.

CVPS did not propose specific hours of construction for the Middlebury Reliability Project. It appears reasonable to apply the same limits as for the Hewitt Road Project. If CVPS believes these limits to be unnecessarily restrictive for the Middlebury Reliability Project, it should present an alternate proposal, with supporting reasons, in its comments on this Proposal for Decision.

(c) Headwaters

[10 V.S.A. § 6086(a)(1)(A)]

82. The Projects are not located in a headwaters area. Upton pf. Docket No. 7597 at 15; exh. CVPS-7597-TOU-1.

(d) Waste Disposal

[10 V.S.A. § 6086(a)(1)(B)]

83. The Projects will meet any applicable health and Department of Environmental Conservation ("DEC") regulations regarding the disposal of wastes. This finding is supported by findings 84 through 86, below.

84. The Projects do not involve disposal of wastes or injection of any material into surface or ground water (other than the potential for oil leaks from the Hewitt Road temporary

substation, addressed below). Retired materials will be removed from the site for salvage, or for disposal in accordance with the Vermont Solid Waste Management Rule. Shrubs cleared from the Hewitt Road substation yard will be chipped on site. The material will be reused on site or hauled away for reuse off site. Any stumps will be disposed of at a certified off-site facility in accordance with the Vermont Solid Waste Management Rule. Upton pf. Docket No. 7597 at 16; Upton pf. Docket No. 7596 at 6; tr. 7/8/10 at 28–29 (Upton).

85. As a construction site greater than one acre in size, the Projects have received authorization under Vermont's stormwater construction general permit, issued by DEC pursuant to the National Pollutant Discharge Elimination System ("NPDES") program of the Clean Water Act. Construction will be performed in accordance with ANR's Low Risk Site Handbook for Erosion Prevention and Sediment Control. The Hewitt Road Project will be accommodated entirely within the limits of the yard expansion and associated stormwater construction permit. Upton pf. Docket No. 7597 at 16; exh. CVPS-7597-TOU-10; Upton pf. Docket No. 7596 at 6–7.

86. The new Hewitt Road transformer will be installed with a secondary oil-containment system, consisting of a containment pit filled with crushed stone and surrounded by an impervious liner, with an 18-inch-diameter perforated drain pipe running from the foundation pad through the pit and liner. The pipe will allow water to move through the containment structure continuously. At the bottom of the pipe will be polymer beads that allow the passage of water but solidify upon contact with oil, preventing the further migration of any liquid out of the containment structure. The structure is designed to contain approximately 150% of the volume of oil in the transformer. The design is consistent with the Institute of Electrical and Electronics Engineers protocols for secondary oil containment. Upton pf. Docket No. 7596 at 7; exh. CVPS-7596-JRF-4.

87. CVPS has not included oil containment for the transformer in the temporary substation that it now proposes as part of the work at the Hewitt Road substation. The transformer will contain hundreds of gallons of petroleum-based, non-PCB-contaminated oil. The temporary substation will be installed approximately 100 feet from a wetland at the site. Tr. 7/8/10 at 41–42 (Fiske) and 46–48 (Upton, Fiske).

88. In the event of an oil leak from the temporary substation, CVPS would clean up the impacted soils and mark, transport and dispose of those soils in accordance with Vermont solid-waste regulations. Tr. 7/8/10 at 45 (Upton).

89. CVPS could provide oil containment for the temporary substation by installing an impervious liner directly on the surface of the ground beneath the supporting timbers for the electrical equipment, with a small drain pipe to allow passage of rainwater. The edges of the liner would be placed over a perimeter of additional cribbing eight inches in height. Such a structure could contain approximately 1,500 gallons of oil, and is estimated to cost approximately $2,500. CVPS July 16, 2010, Response to Hearing Officer Record Request at A. 8.

Discussion

At the July 8, 2010, technical hearing, CVPS informed the parties and the Board that it would not be utilizing its portable substation to provide continued service to customers during the construction activities at the Hewitt Road substation. Instead, CVPS now proposes to install a temporary substation.

At the hearing, Board staff and ANR inquired about plans for oil containment for the temporary substation's transformer. CVPS does not propose to install any oil containment because, in its view, such containment is not needed. CVPS contends that in the event of a leak, the oil would tend to remain in the soils beneath the temporary substation, and not migrate toward the wetland.

Subsequent to the hearing, on July 16, 2010, CVPS filed responses to record requests that included further comments on the need for, and cost of, oil containment for the temporary substation. CVPS continued to assert that oil containment is not needed. CVPS further recommended that, if the Board were to require oil containment, it should require a surface liner with temporary berm, as described in CVPS's response.

On July 22, 2010, ANR filed a letter stating:

> ANR State Wetland Coordinator Alan Quackenbush has reviewed the proposed plans for the temporary substation and the response to the records request. Mr. Quackenbush recommends that CVPS install the surface liner and temporary berm structure. This relatively inexpensive measure is the least intrusive and best solution to offset the potential risk of an oil spill. The installation of the surface

> liner and berm is a reasonable minimization of the risk to the adjacent wetland from a potential oil spill.[9]

Also on July 22, the Department filed a letter stating its belief that oil containment should be installed for the portable substation, but deferring to ANR on this issue.

It is unfortunate that the issue of oil containment for the temporary substation could not have been addressed earlier in the process. While I recognize that CVPS was required to modify its plans to incorporate the temporary substation due to the unavailability of the previously planned portable unit, I am concerned that the parties have had insufficient opportunity to address concerns about impacts from a potential oil spill, especially in light of the proximity of the temporary substation to the wetland. Therefore, and given the relatively modest cost of a surface-liner system as described in CVPS's record response, I conclude that it is appropriate to require such a system for oil containment at the temporary substation. I recommend that the Board include a condition in the CPGs requiring CVPS to submit, for Board approval, plans for oil containment at the temporary substation.

(e) Water Conservation

[10 V.S.A. § 6086(a)(1)(C)]

90. The Projects will not require the use of water other than for dust control. Any water for dust control will be brought in from off-site. Upton pf. Docket No. 7597 at 16; Upton pf. Docket No. 7596 at 7; tr. 7/8/10 at 29–30, 138 (Upton).

(f) Floodways

[10 V.S.A. §§ 6086(a)(1)(D)]

91. The existing transmission line between Middlebury Lower substation and Weybridge substation, and the proposed transmission line between Weybridge substation and the VELCO New Haven substation, both cross the floodway of Otter Creek. Both crossings are located within the boundaries of FERC-licensed projects. The work at both locations involves the replacement of existing crossings, with an overall reduction in the number of floodplain

9. Letter from Judith Dillon, Esq., to Susan M. Hudson, Clerk, July 22, 2010.

structures, and will require approval from the ACOE. The work will not restrict or divert the flow of flood waters, and will not endanger the health, safety and welfare of the public or of riparian owners during flooding. Upton pf. Docket No. 7597 at 16-17; exh. CVPS-7597-TOU-1; tr. 7/8/10 at 139.

92. The Hewitt Road Project is not located in a floodway. Upton pf. Docket No. 7596 at 7.

(g) Streams

[10 V.S.A. §§ 6086(a)(1)(E)]

93. The existing transmission line to be reconductored, and the proposed new transmission line, cross a number of small streams. All stream crossings have been located in the field and mapped. Upton pf. Docket No. 7597 at 17; exh. CVPS-7597-TOU-9.

94. Between Middlebury Lower substation and Weybridge substation, the Middlebury Reliability Project involves the replacement of conductor wire on an existing transmission line within an existing cleared right-of-way. Seven poles will be replaced in their existing locations. No road construction or access upgrades will be required. Stream crossings will be avoided to the greatest extent possible during construction through careful management of access points (using multiple access points to avoid unnecessary crossings, and scheduling work to reduce the number of times a stream is crossed). Temporary bridges will be used as necessary to protect streambank integrity. Upton pf. Docket No. 7597 at 17.

95. Between the Weybridge substation and the VELCO New Haven substation, the proposed new 46 kV transmission line will be constructed completely on existing property or rights-of-way that CVPS or VELCO owns, largely within the right-of-way of an existing CVPS distribution line. The existing distribution line will be rebuilt along its existing centerline as an underbuild on structures shared with the new transmission line, except at the beginning and end of the transmission line and at two angle structures. The new combined line will have fewer poles overall than the existing distribution line, and many of the pole locations will change along the existing alignment. CVPS selected pole locations to avoid stream impacts by maintaining distances of at least 100 feet between streambanks and poles where possible. Johnson pf. Docket No. 7597 at 3–6; Johnson supp. pf. Docket No. 7597 at 4; Upton pf. Docket No. 7597 at 17–18.

96. One new structure location for the combined transmission/distribution line will be within 100 feet of a stream: proposed structure 25 will be approximately 25 feet from a ditched intermittent stream in an active farm pasture. No road construction or access upgrades will be required. Stream crossings will be avoided to the greatest extent possible during construction through careful management of access points (using multiple access points to avoid unnecessary crossings, and scheduling work to reduce the number of times a stream is crossed). Upton pf. Docket No. 7597 at 18; exh. CVPS-7597-RCJ-1b Revised.

97. There are no streams at the Hewitt Road Project site. Upton pf. Docket No. 7596 at 7.

(h) Shorelines

[10 V.S.A. §§ 6086(a)(1)(F)]

98. The Projects will maintain the natural condition of involved streams and will not endanger the health, safety, or welfare of the public or adjoining landowners. The Project will, insofar as possible, retain all shorelines and waters in their natural condition, allow continued access to the waters and the recreational opportunities provided by the waters, retain or provide vegetation which will screen the Project from the waters, and stabilize the bank from erosion, as necessary, with vegetation cover. Tr. 7/8/10 at 140–143 (Upton); finding 99, below.

99. The Middlebury Reliability Project is located on the shoreline of Otter Creek adjacent to the Middlebury Lower and Weybridge substations. River crossings were designed in consultation with ANR, and must be approved by the ACOE. The project will, insofar as possible and reasonable in light of its purpose, retain the shoreline and the waters in their natural condition, allow continued access to the waters and the recreational opportunities provided by the waters, retain or provide vegetation that will screen the project, and stabilize the bank from erosion, as necessary, with vegetation cover. Upton pf. Docket No. 7597 at 18; exh. CVPS-7597-TOU-1.

100. The Hewitt Road Project is not located on a shoreline. Upton pf. Docket No. 7596 at 7.

(i) Wetlands

[10 V.S.A. § 6086(a)(1)(G)]

101. The Projects are in compliance with the rules of the Natural Resources Board relating to significant wetlands. Upton pf. Docket No. 7596 at 8; Upton pf. Docket No. 7597 at 18-21.

102. Wetlands associated with the Middlebury Reliability Project were delineated in the field, evaluated for functional significance, and mapped by VHB Pioneer of Vergennes. Within the VELCO right-of-way, CVPS relied on previously approved wetland delineations conducted by VELCO for the Northwest Reliability Project. Upton pf. Docket No. 7597 at 19; exh. CVPS-7597-TOU-9.

103. Under the Vermont Wetland Rules, the reconductoring work between the Middlebury Lower and Weybridge substations is considered an Allowed Use, when performed in a manner that minimizes wetland impacts and is in accordance with a vegetation management plan approved by ANR. CVPS has an approved plan. None of the poles to be replaced is located in a wetland. Upton pf. Docket No. 7597 at 19.

104. Within the distribution and transmission rights of way between the Weybridge substation and the VELCO New Haven substation are eight significant (Class 2) wetlands and fourteen Class 3 wetlands. One pole will be located in a Class 2 wetland, and two poles will be located within the 50-foot upland buffer of a Class 2 wetland. No poles will be located within Class 3 wetlands. There will be very little clearing within wetlands, as most of the wetlands are located within active agricultural fields and pastures or existing cleared rights-of-way. Upton pf. Docket No. 7597 at 19; exhs. CVPS-7597-TOU-3A, TOU-3B, TOU-3C, RCJ-1a Revised through 1e Revised.

105. Wetland impacts will be minimized through careful management of access points (using multiple access points to avoid wetland crossings, and choosing the shortest possible route to poles located in wetlands). Construction will take place during dry conditions where feasible, and temporary construction matting will be used as necessary to protect wetland soils and vegetation. Any required post-construction seeding will use native wetland seed mixes approved by ANR. Upton pf. Docket No. 7597 at 19–20.

106. The expansion of the Hewitt Road substation that is proposed as part of the Middlebury Reliability Project will result in impacts to 34 square feet of a Class 2 wetland and 8,910 square feet of its associated upland buffer. There will also be 20 square feet of fill in a Class 3 wetland from the extension of an existing culvert. Upton pf. Docket No. 7597 at 20; JRF exh. CVPS-7597-25.

107. Overall, the Middlebury Reliability Project will result in temporary and permanent fill totaling approximately 75 square feet of both Class 2 and Class 3 wetlands. When temporary placement of construction matting is added to the area of fill, total wetland impacts will be approximately 2,475 square feet, and the Middlebury Reliability Project therefore qualifies for approval under Category 1 (non-reporting) of the ACOE Vermont General Permit. The General Permit requires avoidance and minimization of wetland impacts through project design and construction practices. Upton pf. Docket No. 7597 at 20-21.

108. Design of the Middlebury Reliability Project included extensive consultation with the Vermont Wetlands Office. On April 20, 2010, DEC issued Conditional Use Determination #2010-008 for the project. Upton pf. Docket No. 7597 at 20; exh. CVPS-7597-TOU-11.

109. All work associated with the Hewitt Road Project will take place within the permitted substation expansion associated with the Middlebury Reliability Project, and will not result in any additional impacts to adjacent wetlands or regulated upland buffers. Upton pf. Docket No. 7596 at 8; exh. CVPS-7596-JRF-6.

(j) Sufficiency of Water and Burden on Existing Water Supply

[10 V.S.A. §§ 6086(a)(2)&(3)]

110. The Projects will not require the use of water other than for dust control. Any water for dust control will be brought in from off-site. Upton pf. Docket No. 7597 at 16; Upton pf. Docket No. 7596 at 7; tr. 7/8/10 at 29–30, 138 (Upton).

(k) Soil Erosion

[10 V.S.A. § 6086(a)(4)]

111. The Projects will not cause unreasonable soil erosion or reduction in the capacity of the land to hold water so that dangerous or unhealthy conditions may result. Upton pf. Docket No. 7596 at 8-9; Upton pf. Docket No. 7597 at 21; findings 85, above, and 112, below.

112. All line work will take place within existing cleared rights of way. No road construction or access upgrades will be required. When construction is complete, existing access ways will be seeded and mulched as required. Upton pf. Docket No. 7597 at 21; Docket No. 7597 exhs. TOU-10, and TOU-11.

(l) Transportation Systems

[10 V.S.A. § 6086(a)(5)]

113. The Projects will not cause unreasonable congestion or unsafe conditions with respect to transportation systems. Upton pf. Docket No. 7596 at 9; Upton pf. Docket No. 7597 at 21.

114. The proposed new transmission line will utilize an existing distribution corridor, and existing road crossings, between the Weybridge substation and the VELCO right-of-way east of U.S. Route 7. There will be one new road crossing at Town Hill Road in New Haven, which will not affect traffic congestion or safety. Appropriate traffic control measures will be used at all road crossings during construction, and the installation of the new line across U.S. Route 7 in New Haven will be done with the authorization of the Vermont Agency of Transportation. Upton pf. Docket No. 7597 at 21-22.

115. Access to the Hewitt Road substation will be unchanged, as will the post-construction traffic associated with routine inspections and maintenance activities at the substation. Upton pf. Docket No. 7596 at 9.

(m) Educational and Municipal Services

[10 V.S.A. § 6086(a)(6)and (7)]

116. The Projects will not cause an unreasonable burden on the ability of the Towns of Middlebury, Weybridge, New Haven, or Bristol to provide educational or municipal services. Upton pf. Docket No. 7597 at 22; Upton pf. Docket No. 7596 at 9.

(n) Aesthetics, Historic Sites and Rare and Irreplaceable Natural Areas

[10 V.S.A. §6086(a)(8)]

(I) Aesthetics

117. The Projects will not have an undue adverse effect on aesthetics or on the scenic or natural beauty of the area, subject to, and upon compliance with, the conditions set forth in the proposed order below. This finding is supported by findings 118 through 155, below.

VELCO Middlebury Substation and VELCO New Haven Substation

118. The proposed work at VELCO's Middlebury substation is limited to the addition of a 46 kV breaker, which will occur within the existing substation, located a substantial distance (over 400 feet) from the nearest roadway, Seminary Road. The substation is partially screened towards the west by vegetation and, given its distance from the roadway, the proposed modifications will likely not be noticeable and will not have an adverse aesthetic impact. Upton pf. Docket No. 7597 at 29; exh. DPS-1 at 3; exhs. CVPS-7597-JRF-3, 8, 9 and 10.

119. The proposed work at VELCO's New Haven substation is limited to the addition of a 46 kV breaker and a switch, which will occur within the existing facility and will not materially change the appearance of the substation. There will be no adverse aesthetic impacts at this location. Upton pf. Docket No. 7597 at 29; exhs. CVPS-7597-JRF-21, 22, and 23.

CVPS Middlebury Lower Substation

120. The reconstruction and relocation of the Middlebury Lower substation will involve substantial work, including clearing vegetation, regrading the site, and extending the access road by 300 feet. The new substation will be constructed to the north side of the existing substation,

on the east side of Otter Creek, and will be located within an eighty-foot by 116-foot area enclosed by an eight-foot-high fence. Fiske pf. Docket No. 7597 at 12-16; exhs. CVPS-7597-JRF-11, 12 and 13; exh. DPS-1 at 3.

121. The new facility will be located approximately 100 to 300 feet from the nearest residences, up a steep embankment, and will not be visible from any nearby residences. The substation site will be wooded to the west, north, and east and will be seen only from the existing facility's access road to the south. No additional noise will be audible from the new facility. Tr. 7/8/10 at 151-53 (Upton).

122. The Town of Middlebury supports the proposed project and, because of its isolation from areas of public view, believes that the reconstruction of the Middlebury Lower substation will not have significant aesthetic impacts. *See* exh. Joint-1 at 33 (citing the public hearing testimony of Fred Dunnington, Middlebury Town Planner).

123. The Department's aesthetic expert found that the new facility's aesthetic impacts would not be so out of character with the existing utility scale, and uses, so as to be undue. Exh. DPS-1 at 3.

Middlebury Lower to Weybridge Reconductoring

124. The 3.9 miles of reconductoring between the Middlebury Lower Substation and the Weybridge substation will involve the installation of new conductor wires along the existing line, with no changes to its alignment or pole locations. Upton pf. Docket No. 7597 at 23-24; exhs. CVPS-TOU-2A-2B.

125. The location of the Otter Creek crossing will be changed in order to reduce the number of poles in the Otter Creek wetland and the number of total poles between the substation and the west side of the river. This pole-related work is located entirely within the boundaries of the FERC-licensed Middlebury Lower facility. All work must be approved by the Federal Energy Regulatory Commission ("FERC") and certified by ANR to comply with Vermont Water Quality Standards. The river crossing must be approved separately by the ACOE. Upton pf. Docket No. 7597 at 24; exhs. CVPS-TOU-2A & CVPS-7597-JRF-11.

126. A total of seven poles will be replaced over the 3.9-mile length of the line – all in their existing locations. Pole heights will not increase by more than five feet at any location. Upton pf. Docket No. 7597 at 24; exhs. CVPS-TOU-2A-2B.

127. The reconductoring portion of the Middlebury Reliability Project will have a nominal aesthetic impact. The reconductoring of the line with heavier gauge conducts will happen largely out of sight and will not be out of character with the existing conditions and therefore will not result in an adverse impact on aesthetics or the scenic and natural beauty of the area. Upton pf. Docket No. 7597 at 24; exh. DPS-1 at 3.

CVPS Weybridge Substation

128. Improvements at CVPS's Weybridge Substation are limited to the addition of two 46 kV switches and fiber optic equipment, which will occur within the existing facility and will not materially change the appearance of the substation. Fiske pf. at 18-19; exhs. CVPS-7597-JRF-18-20.

129. The switch installation will require the temporary use of a portable substation, a temporary access road, gravel pad, and two temporary poles. Fiske pf. at 18-19; exhs. CVPS-7597-JRF-18, 19 and 20.

Weybridge to New Haven 46 kV Transmission Line

130. The majority of the Middlebury Reliability Project's construction involves upgrades to existing transmission and substation facilities in their existing locations. The one new facility – the 5.05 miles of 46 kV transmission line in Weybridge and New Haven – will be consolidated with an existing three-phase distribution line or be located within an existing transmission right-of-way and adjacent to two larger transmission lines. Upton pf. Docket No. 7597 at 23; Johnson pf. Docket 7597 at 3.

131. CVPS considered several design options for the new Weybridge to New Haven transmission line and chose the current design, which runs the new transmission/distribution line in the existing distribution right-of-way as far as the VELCO transmission right-of-way to VELCO's New Haven Substation. The proposed design was chosen for the following reasons:

applicable municipal and regional plans for the Middlebury Reliability Project all include language encouraging the use of existing corridors; the distribution line is located within easements 100 feet in width for its entire length; the distribution line runs almost entirely through open fields and pastures; and, when presented with the option of following the distribution right-of-way east of U.S. Route 7 or building a new line segment along Town Hill Road, the Town of New Haven and attendees at the November 2008 public meeting expressed a preference for the proposed route in this area. Upton pf. Docket No. 7597 at 25-26.

132. The majority of the line will utilize standard transmission "T" construction, which is horizontal construction on a ten-foot crossarm. Under the transmission conductors an All-dielectric Self Supporting ("ADSS") fiber optic cable will be installed for high-speed communications and SCADA between the transmission/distribution/substation facilities and CVPS headquarters. Below the ADSS cable, the distribution line will be reconstructed with 477 ACSR phases and a 4/0 ACSR neutral below the crossarm. Johnson pf. Docket No. 7597 at 3; exh. CVPS-7597-RCJ-2.

133. For sharp angles, generally ten degrees and over, the transmission structures will typically utilize standard vertical construction. For long spans like the crossing of Otter Creek and one of the spans east of Campground Road, multiple pole structures will be required for additional strength and conductor spacing. The original design included six angle locations where the transmission and distribution were to split onto separate structures (structures 10, 12, 46, 47, 56, and 68). The final plan reduced these angled locations requiring separate structures down to two locations, with both remaining locations well concealed. Collocating the transmission and distribution at the other four angle locations eliminated the second structure and also reduced the height of two structures (48 and 56) by five feet. Johnson pf. Docket No. 7597 at 3-4; Johnson supp. pf. Docket No. 7597 at 4; exhs. CVPS-7597-RCJ-2-4, *compare with* exhs. CVPS-7597-RCJ-1a Revised through 1e Revised.

134. Between Weybridge Station and the VELCO transmission right-of-way east of U.S. Route 7 in New Haven, the Project will involve reconstruction of an existing three-phase distribution line to accommodate a new 46 kV transmission line along with the distribution facilities, on a single set of pole structures. Poles will increase in height by approximately

fifteen feet on average and will have two sets of crossarms. Individual pole locations will change but the line will generally remain in the same alignment (with the exception of the Otter Creek crossing, discussed directly below). Upton pf. Docket No. 7597 at 24-25; Johnson pf. Docket No. 7597 at 4-6; exhs. CVPS-TOU-3A-3C & CVPS-7597-RCJ-1a Revised through 1e Revised.

135. The new co-located transmission/distribution line will be rebuilt along the same centerline as the former distribution line, with one deviation – where the existing distribution line leaves the north of the Weybridge substation to cross from the south bank of Otter Creek to Twitchell Hill Road. The existing distribution line crosses from the south bank of the Otter Creek and goes to a point on a fairly high and distinct bluff on the north bank. CVPS proposes to reconfigure the crossing so that the new co-located line stays at the same elevation on both sides of the river. CVPS proposes to accomplish this by moving the pole eastward to the bottom of the bluff, which will reduce the line's visual impact. The precise location of the new structure within the existing alignment was chosen in order to partially screen it from a residence on Field Days Road. A single-phase tap will run to the existing distribution pole to provide continued service to the home served by the existing configuration. In addition, in order to reduce pole heights at the river crossing, the first segment of the distribution line – between the substation and Twitchell Hill Road – will be rerouted along Quaker Village Road and Field Days Road in an existing three-phase corridor. Upton pf. Docket No. 7597 at 27; Johnson pf. Docket No. 7597 at 4; exh. CVPS-7597-RCJ-1a Revised.

136. The Weybridge-to-New Haven line then continues along Pearson Road east towards Route 7. This corridor must be cleared to its full 100-foot width, but there are few places where new clearing will be required, and the most significant clearing will take place adjacent to an existing stone quarry, not residential buildings. Upton pf. Docket No. 7597 at 26; Johnson pf. Docket No. 7597 at 5; tr. 7/8/10 at 150 (Upton).

137. Aesthetic concerns were raised by landowners and the Department's aesthetic expert about the line's impacts immediately before it reaches U.S. Route 7. The areas of concern for the Department's expert were an existing home and farmstand adjacent to the proposed crossing of U.S. Route 7 ("Bingham Farm property"), and the area surrounding the Weybridge substation in

Weybridge (see the discussion of related distribution construction below). In addition, landowners in the area of proposed poles 54, 55, and 56, met with CVPS after the April 20, 2010, public hearing, to discuss the potential visual impacts of the 46 kV structures on the landowners' residence. As a result, CVPS proposes to transplant pin oak trees from the VELCO right-of-way to an area just south of proposed structure 56 in order to provide a screen for the adjacent residence. Exh. Joint-1; exhs. CVPS-7597-RCJ-1e Revised and CVPS-7597-TOU-13; Upton supp. pf. at 1-3.

138. On June 3, 2010, a site visit was conducted with the Department's aesthetic expert, the underlying landowner at the Bingham Farm property, and representatives from CVPS and the Department. Based on input from the Department's aesthetic expert and the landowner, CVPS has agreed to plant two blue spruce trees and a line of apple trees or other compatible species on the property, the precise location and composition of which would be determined jointly by the landowners, CVPS, and the Department upon completion of the Middlebury Reliability Project. The purpose of the plantings is to screen the adjacent home and farmstand from a pole structure carrying both electrical conductors and a set of distribution voltage regulators. CVPS will also attempt to relocate an existing distribution anchor to a location more convenient for lawn maintenance and has agreed to limit construction activities on the Bingham Farm property, when the farmstand is operational, to the hours before 3 p.m. Exh. Joint-1; exh. DPS-1 at 4–7; exh. CVPS-7597-RJC-Revised-1e; tr. 7/8/10 at 155–56 (Upton).

139. At the intersection with the VELCO transmission right-of-way east of U.S. Route 7, the transmission line will continue to VELCO's New Haven Substation within the existing VELCO right-of-way using standard 46 kV construction. Johnson pf. Docket No. 7597 at 4; exhs. CVPS-7597-RCJ-3, 5, 6 and 7.

140. At the proposed crossing of Town Hill Road within the existing VELCO right-of-way, in order to accommodate the new 46 kV line the Petitioners propose to remove several trees that were installed by VELCO as required by the Board in its January 3, 2006, Order in Docket No. 6860 approving the Northwest Reliability Project. CVPS proposes to replace the existing hardwood trees with softwood species that can be managed at lower heights while retaining their value as visual screens from Town Hill Road. CVPS will be discussing the project with the

landowners located on the east side of the crossing of Town Hill Road across from the VELCO New Haven Substation. Upton pf. Docket No. 7597 at 28; exh. CVPS-7597-RCJ-1e Revised; tr. 7/8/10 at 158–59 (Johnson).

141. The Department's aesthetic expert conducted site visits along the Weybridge-to-New-Haven corridor and concluded that, where necessary, proper mitigation steps have been taken for all elements of the project and that the Weybridge to New Haven line will not have an undue adverse effect on the surrounding area. Tr. 7/8/10 (Kane); exh. DPS-1.

Middlebury Reliability Project: Related Distribution Changes

142. The Middlebury Reliability Project also requires changes to existing distribution facilities (CVPS Line 4) between Weybridge Substation and the VELCO transmission right-of-way east of Route 7. Distribution construction will consist mainly of attaching the existing three-phase conductors to the new pole structures below the proposed transmission conductors. This joint construction is intended to reduce the cost, and the visual, land-use, and environmental impacts, of the proposed 46 kV line by making use of an existing 100-foot corridor. Upton pf. Docket No. 7597 at 31; exhs. CVPS-7597-RCJ-1a Revised through 1e Revised.

143. An existing three-phase distribution circuit (Line 3) crosses Otter Creek adjacent to the Weybridge dam and continues along Field Days Road into New Haven, and also connects to Line 4 via a tap line on Twitchell Hill Road. In order to reduce the impact of the proposed 46 kV line as it crosses Otter Creek, the first segment of Line 4 will be consolidated with Line 3 on a single set of poles between the substation and Twitchell Hill Road, at which point the existing tap line will simply become part of Line 4. Line 3 currently utilizes standard cross-arm construction. The new double-circuit segment will carry the Line 3 conductors on pole-top cross-arms. Conductors for Line 4 will be located on cross-arms as they cross Otter Creek, and on spacer cables along Field Days Road in order to reduce their visual impact. Upton pf. Docket No. 7597 at 31-32; exh. CVPS-TOU-4.

144. On June 3, 2010, CVPS, the Department, and the Department's aesthetics expert met with adjoining landowners west across the Otter Creek from the Weybridge Substation and

assessed the impacts of both the new co-located distribution/transmission line and the proposed distribution construction on the Quaker Village area in general and on the landowners' property in particular. After considering several alternative designs, as presented by CVPS, the Department's aesthetics expert recommended that the design originally proposed by CVPS be used, with one modification, as described in the next finding. Exh. DPS-1; exh. Joint-1.

145. If CVPS reconfigures the proposed distribution lines, an existing circuit tie switch located on Twitchell Hill Road in New Haven, adjacent to proposed pole 4, could be removed, reducing the visual impacts on the surrounding properties. CVPS has agreed to remove the switch. Exh. Joint-1; exh. DPS-1 at 12.

146. Excess tree removal should be avoided in the areas of the intersection of Quaker Village Road and Field Days Road and on Field Days Road, along the northern bank of the Otter Creek. Exh. DPS-1 at 12.

VELCO New Haven Substation

147. The proposed work at VELCO's New Haven Substation is limited to the addition of two 46 kV transmission breakers, which will occur within the existing facility and will not materially change the appearance of the substation. Fiske pf. Docket No. 7597 at 23; exhs. CVPS-7597-JRF-21-23.

Hewitt Road Substation

148. The existing Hewitt Road Substation is located approximately 320 feet from Hewitt Road, within a fifty-foot by eighty-foot fenced enclosure. The existing steel support structure is thirteen feet wide, twenty-five feet tall, and four feet deep. Fiske pf. Docket No. 7596 at 2; Fiske pf. Docket No. 7597 at 25; exhs. CVPS-7597-JRF-25-27.

149. The reconstructed and expanded Hewitt Road Substation will be located approximately 250 feet from Hewitt Road, with an eight-foot-high fence enclosing the 120-foot by 120-foot substation yard. CVPS will reconstruct the substation steel with new steel supports that range in height up to twenty-six feet high, not including the height of the sixteen-foot-high lightning

masts. Fiske pf. Docket No. 7597 at 25-26; Upton pf. Docket No. 7597 at 9 and 29–30; exh. DPS-1 at 8; exh. CVPS-7596-JRF-1-9; exhs. CVPS-7597-JRF-25, 26 and27.

150. Substation yard lighting will be installed on the fence for maintenance and emergency activities. The fence lighting will be operated from a switch located within the substation. Fiske pf. Docket No. 7597 at 25.

151. The Project will substantially increase the size of the substation yard, and will involve the removal of a stand of pines and other species located just outside the northerly fence, between the substation and Hewitt Road. The remaining deciduous trees and cedar hedgerow will continue to screen the facility from the roadway and a new screen will be established closer to the northern side of the substation fence with the planting of a continuous row of cedars eight feet tall. The mature trees on the eastern side of the facility will not be removed even with the fence expansion and the reconstruction of the driveway. Upton pf. Docket No. 7596 at 11; Upton pf. Docket No. 7597 at 30; tr. 7/8/10 at 32 (Upton); tr. 7/8/10 at 53 (Fiske); exhs. CVPS-7597-JRF-25, 26 and 27; exh. DPS-1 at 8.

152. The closest residence to the substation is located approximately 250 feet northeast of the expansion and the existing tree-screen along the east side of the driveway will be maintained. The screening already in place will sufficiently screen the facility from the residence. Upton pf. Docket No. 7597 at 30; tr. 7/8/10 at 77 (Kane); exh. CVPS-7597-JRF-25.

153. The noise levels at the reconstructed substation will be the same or lower than the noise levels at the existing facility. Upton pf. Docket 7596 at 11; CVPS Response to Hearing Officer Record Request, July 16, 2010, at A. 4.

154. The Hewitt Road Project construction requires the installation of a temporary substation, access road and gravel pad to the south of the existing facility for four to six months. The temporary substation, access road and gravel pad will be removed after construction. Fiske pf. Docket No. 7597 at 26-27; tr. 7/8/10 at 41–43, 52 (Fiske); exh. CVPS-7597-JRF-25; exh. CVPS-7596-JRF-9.

155. The Hewitt Road Project will not significantly change the aesthetic impact of the facility and, therefore, will not have an undue adverse impact on the aesthetics at this location. Upton pf.

Docket No. 7596 at 11; Upton pf. Docket No. 7597 at 30; exh. DPS-1 at 8; tr. 7/8/10 at 76-77 (Kane).

Discussion - Aesthetics

Section 248(b)(5) requires the Board to make a finding that a proposed transmission project will not have an undue adverse effect on aesthetics, with due consideration given to the criteria for aesthetics outlined under the so-called Act 250 statute. In determining whether a proposed project would have an undue adverse impact on aesthetics, the Board has adopted the Environmental Board's so-called *Quechee* test. The Board has previously summarized the *Quechee* analysis:

> In order to reach a determination as to whether the project will have an undue adverse effect on the aesthetics of the area, the Board employs the two-part test first outlined by the Vermont Environmental Board in *Quechee*, and further defined in numerous other decisions.
>
> Pursuant to this procedure, first a determination must be made as to whether a project will have an adverse impact on aesthetics and the scenic and natural beauty. In order to find that it will have an adverse impact, a project must be out of character with its surroundings. Specific factors used in making this evaluation include the nature of the project's surroundings, the compatibility of the project's design with those surroundings, the suitability of the project's colors and materials with the immediate environment, the visibility of the project, and the impact of the project on open space.
>
> The next step in the two-part test, once a conclusion as to the adverse effect of the project has been reached, is to determine whether the adverse effect of the project is "undue." The adverse effect is considered undue when a positive finding is reached regarding any one of the following factors:
>
> 1. Does the project violate a clear, written community standard intended to preserve the aesthetics or scenic beauty of the area?
>
> 2. Have the applicants failed to take generally available mitigating steps which a reasonable person would take to improve the harmony of the project with its surroundings?

> 3. Does the project offend the sensibilities of the average person? Is it offensive or shocking because it is out of character with its surroundings or significantly diminishes the scenic qualities of the area?[10]

In addition to the *Quechee* analysis, the Board's consideration of aesthetics under Section 248 is "significantly informed by overall societal benefits of the project"[11] and the Board has further explained that:

> Criterion 8 of Act 250 does not guarantee that views of the landscape will not change. It does, however, require that as development does occur, reasonable consideration is given to the visual impacts on the neighboring landowners, the local community, and on the specific scenic resources of Vermont.[12]

As this Board has noted in previous decisions concerning transmission upgrade projects, "Vermonters are accustomed to the presence of power lines, both distribution and transmission, in many locations."[13] In this case, the new substation and transmission line infrastructure will be introduced into areas where existing substation, transmission and distribution infrastructure has existed as part of the landscape for decades and fits with the overall context of surrounding development. In several areas — in particular, at VELCO's Middlebury, CVPS's Weybridge, and VELCO's New Haven substations, at the New Haven lay-down Area, and within the Middlebury Lower-Weybridge transmission-line corridor —the Project will not have adverse aesthetic impacts.

In other areas, including the Middlebury Lower Substation, the 46 kV Weybridge-to-New-Haven distribution/transmission line corridor, and the Hewitt Road Substation, the Project will have adverse aesthetic impacts. However, in those areas reasonable and effective mitigation has been developed through planning, design, and adjustments based on consultation with the Department and affected landowners.

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10. Petition of UPC Wind, Docket 7156, Order of 8/8/07 at 64–65 (citations omitted).
11. *In re: Northern Loop Project*, Docket 6792, Order of 7/17/03 at 28.
12. *In re: Northwest Vt. Reliability Project*, Docket 6860, Order of 1/28/05 at 140.
13. *Id.* at 82.

Middlebury Lower Substation

The first inquiry is whether the Middlebury Lower Substation improvements conflict with a clear, written community standard intended to preserve the aesthetics or scenic beauty of the area. No such standard exists and the Town of Middlebury supports the proposed project because of its isolation from areas of public view and because it will not have significant aesthetic impacts.[14]

The second and third *Quechee* inquiries are whether CVPS failed to take generally available mitigating steps to minimize the aesthetic impacts of the Middlebury Lower project and whether it is shocking or offensive. Substation upgrades and additions are to be expected over time. A substation has existed at the Middlebury Lower site for decades and the proposed improvements will not change the facility's basic function or aesthetic impact. Although the reconstruction and relocation of Middlebury Lower will involve substantial work (including clearing vegetation, regrading the site, and extending the access road),[15] the new facility will be heavily screened on three sides and will not be visible from any residences or the nearby Otter Creek. The proposed project will be visible only from the site's existing access road and that view will be within the context of the larger on-site hydro generation facility. Further, no noise will be audible from the new facility[16] and the Department's aesthetic expert found that the new facility's aesthetic impacts would not be undue, taking the larger utility context into consideration.[17] Given that the proposed project will be heavily screened on three sides, will only be visible from one limited vantage point, and will be located on a site that already includes a large hydro electric generation facility, I conclude that no further mitigation is necessary and the proposed project will not be shocking or offensive. For these reasons, I conclude that the Middlebury Lower project will not have an undue aesthetic impact on the surrounding area.

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14. *See* Exh. Joint-1 at 33 (citing the Public hearing testimony of Fred Dunnington, Middlebury Town Planner).
15. Fiske pf. Docket No. 7597 at 12-16; exhs. CVPS-7597-JRF-11, 12 and 13; exh. DPS-1 at 3.
16. Tr. 7/8/10 at 151-53 (Upton).
17. Exh. DPS-1 at 3.

Weybridge-to-New-Haven transmission line and distribution upgrades

The first *Quechee* inquiry is whether any clear, written community standards are at odds with the Weybridge-to-New-Haven line and distribution upgrade projects. Community standards included in municipal and regional land-use planning documents do express concern over the expansion of large-scale utility infrastructure. The New Haven Town Plan and the Addison County Regional Plan in particular include objections to the unnecessary construction of new transmission facilities. However, the plans base their objections on clearly stated concerns over potential consequences for human health, natural resources, and the natural beauty of the area. Neither plan rejects outright the need for reliable electric service for area residents; rather, each states a clear expectation that new facilities must be necessary and designed with careful consideration of, and respect for, the natural and cultural resources of the region. In this case, CVPS sought out local and regional planning organizations early in the process, providing information on project need and environmental assessments, and actively seeking feedback from municipalities, the regional planning commission, and affected property owners. The Company engaged in public discussions of alternative designs in order to gauge local preferences prior to submitting its proposal for approval. It is apparent that CVPS worked to address each of the potential objections arising from written community standards, as evidenced by the early and active engagement with ACRPC and the absence of adversarial interventions in the hearing process.

The second question to be answered is whether CVPS has taken steps that a reasonable person would take to mitigate the adverse aesthetic impacts of the proposed project. At the start of the project, CVPS undertook a comprehensive study and carefully considered whether construction of the project could or should be avoided or delayed and considered a number of alternative designs. Once the project was determined to be necessary, a number of specific mitigation steps were taken in the detailed design. First, CVPS opted to utilize, to the fullest extent possible, the existing Line 4 right-of-way. Second, although the co-location of lines on a single set of poles increases structure height, it also reduces the number of poles and affected locations. In addition, CVPS reduced the number of separated pole structures from eight in the original proposal to two in its final design. Both the use of existing rights-of-way and the

consolidation of electric lines are encouraged by local and regional plans as a way to reduce land-use and aesthetic impacts. Third, CVPS worked with landowners to implement design modifications that reduce the impacts on several sensitive locations, including around the Weybridge substation and the Bingham Farm property. Fourth, in the location where aesthetic mitigation was previously installed by VELCO in the form of roadside trees along Town Hill Road in New Haven and where those trees would interfere with the proposed 46 kV transmission line, CVPS has proposed to replace the trees with lower-growing species that will match the existing plantings directly under the VELCO line.[18] Where specific concerns were voiced by individual landowners, CVPS participated in field visits with them to determine whether mutually acceptable mitigation measures could be adopted. Finally, CVPS engaged in an open discussion of alternative design options with an independent consultant hired by the Department. This process has provided a measure of assurance that mitigation measures proposed by CVPS are effective and reasonable, and has also resulted in further improvements to the design that will benefit CVPS, affected landowners, and the general public.

Near the Weybridge substation, CVPS implemented several design changes, including undergrounding of certain line segments, using lower-profile transmission structures near Otter Creek and removing an existing circuit tie switch.

In the area around proposed pole 56 in New Haven, CVPS has also agreed to plant trees as a visual buffer. With the agreement of the landowners, CVPS offered to remove the pin oaks from the VELCO right-of-way along Town Hill Road and transplant them in locations mutually acceptable to the Company and the property owners. This appears to be an appropriate mitigation step for the Middlebury Reliability Project, although it requires Board approval in Docket No. 6860 because it would modify the mitigation requirements from that proceeding. Furthermore, the Department's aesthetics expert has recommended that CVPS be required to file a site plan showing the details of the proposed mitigation measures in this area.[19] I agree, and recommend that the Board require CVPS to file a site plan, for Board approval, showing the details of its proposed mitigation plantings in this area. Also, if the Board does not approve in

18. As noted below, this particular modification is subject to Board approval in Docket No. 6860.
19. Tr. 7/8/10 at 177–78 (Kane).

Docket No. 6860 the revision to that docket's mitigation requirement, then CVPS should be required to file, for Board approval, alternative mitigation plans for the area around pole 56.

At the Bingham Farm property in New Haven, CVPS has agreed to (a) plant two blue spruce trees and a line of apple trees or other compatible species on the property, with the purpose of screening the adjacent home and farmstand from a pole structure carrying both electrical conductors and a set of distribution voltage regulators. (b) attempt to relocate an existing distribution anchor to a location more convenient for lawn maintenance, and (c) limit construction activities, when the farmstand is operational, to the hours before 3 p.m. These are appropriate mitigation steps and I recommend that the Board require CVPS to implement these agreements.

In addition, CVPS indicated that it was working with the landowners located on the east side of the crossing of Town Hill Road across from the VELCO New Haven Substation. This landowner's residence is already affected by the existing VELCO transmission line; however, the Board should require CVPS to make reasonable efforts to minimize the impact of the proposed transmission line on this already heavily affected residence.

Based on CVPS's adherence to these proposed mitigation measures, I conclude that CVPS has taken reasonable measures to mitigate the aesthetic impacts of the new transmission line and the related distribution upgrades.

The final *Quechee* inquiry is whether the Weybridge to New Haven transmission line and distribution upgrades are shocking and offensive. Although the impacts of the new consolidated line will be easily noticeable, and adverse, they will not be shocking or offensive. The presence of a 46 kV transmission line should not be unexpected in the landscape. I conclude that an additional 5.05 miles of transmission line as a component of the CVPS system will be neither shocking nor offensive to the average person.

For these reasons, I conclude that the overall adverse aesthetic impacts associated with the Webridge-New Haven Transmission line and distribution upgrades will not be undue.

Hewitt Road Substation

The first *Quechee* inquiry is whether the Hewitt Road Substation expansion violates a clear, written community standard intended to preserve the aesthetics or scenic beauty of the area. The Bristol Town Plan specifically encourages "the provision of a safe and continuous electrical power supply to all areas in the Town that require it" and no other written community standard would prohibit the proposed upgrades. Therefore the proposed project does not violate a clear, written community standard.

The second inquiry is whether CVPS has taken appropriate steps to mitigate the aesthetic impacts of the proposed project. Physical constraints including property boundaries and wetlands require that the primary area of expansion be on the north side of the existing substation, towards Hewitt Road. While this requires the removal of an existing mature tree screen, CVPS will retain existing shrubs and deciduous trees between the substation and the road and, in addition, a new vegetative screen, consisting of an eight-foot tall cedar hedgerow, will be installed. No trees will be cleared from the east side of the project site. Neither CVPS or the Department's aesthetics expert believed further screening was necessary, and the owner of the closest residence did not provide comments. Therefore, I find that CVPS has taken reasonable steps to mitigate the adverse impacts of its proposal.

The final inquiry is whether the Hewitt Road Substation expansion are shocking and offensive. As noted above, substation upgrades and additions are to be expected over time. A substation has existed at the Hewitt Road site for decades and the proposed improvements will not change the facility's basic function or aesthetic impact. From the main public vantage point along Hewitt Road, replacement of the existing substation components – including structural steel, the substation transformer, and related equipment – and the addition of a control building and the yard expansion will not significantly change the overall appearance of the facility. The new facility will also continue to be screened from the nearest residence by existing mature trees along the access road, and the noise levels at the reconstructed substation will be the same or lower than the noise levels at the existing facility. Therefore, the expansion will not be shocking or offensive. For these reasons, the adverse aesthetic impacts associated with the Hewitt Road Substation expansion will not be undue.

Based upon the applicable law and the facts presented in this case, I conclude that the Projects, as a whole, will not result in an undue adverse effect on aesthetics, provided that CVPS complies with the terms and conditions set forth in the MOU entered into between CVPS, ANR, and the Department, Exhibit Joint-1, and with the conditions set forth in this proposed order.

However, it is often difficult to determine the full extent of the visual impacts of a project without viewing the completed construction work and, as acknowledged in the MOU, some of the planned mitigation measures for this Project require modifications to the Board-approved mitigation measures implemented in connection with the Northwest Reliability Project.[20] Therefore, as the Board has in previous cases, I recommend that the Board retain the authority to require additional aesthetic mitigation after construction is complete.[21]

(ii) Historic Sites

156. The Project will not have an undue adverse impact on historic sites. This finding is supported by findings 157 through 163, below.

Above-Ground Historic Resources

157. An historic building assessment was performed by Northeast Archaeology Research Center ("NEARC"), formerly associated with the University of Maine at Farmington), in 2009, in consultation with the DHP, for the reconductoring of the lines between the Middlebury Lower and Weybridge substations and the new line configuration between the Weybridge and New Haven substations. In order to determine adverse and undue effects on historic properties, NEARC first identified those historic properties within the affected viewshed. Historic properties are generally defined as buildings or structures being at least fifty years of age and

20. *See* Docket 6860, Order of 1/28/05; exh. Joint-1 (the MOU) at ¶ 14. The MOU also states that "[t]o assure compliance with the terms and conditions of the Orders issued in Docket No. 6860, Petitioners will file for approval of amendments to the Northwest Reliability Project mitigation measures prescribed in that proceeding." However, the Board may deny such an approval, which would require an adjustment to the current aesthetic mitigation plan for this Project.

21. *See, e.g.*, Docket 6860, Order entered 2/19/08, at 2.

retaining original or historic architectural or structural integrity. Upton pf. Docket No. 7597 at 33; exh. CVPS-7597-TOU-5 at 16–22.

158. NEARC identified a number of historic properties within the affected viewshed of the projects. Each historic property was identified, described, and assessed for impact by the proposed transmission lines and substation expansion. The 2009 assessment found that it was unlikely that the reconductoring or new line configuration would have any direct or visual effect on historic structures within the area. Exh. CVPS-TOU-5 at 18-21.

159. DHP reviewed the 2009 assessments and conducted site visits to the Hewitt Road Substation and the Middlebury Reliability Project areas, including the Middlebury Lower and Weybridge substations, the proposed Middlebury to Weybridge reconductoring segment, and the proposed new Weybridge to New Haven segment. Exh. CVPS-7597-TOU-12 at 2-3.

160. The proposed upgrades at the Middlebury and New Haven substations, which are not historic, occur within the existing fence lines. Exh. CVPS-7597-TOU-12 at 3.

161. There are no historic sites within the Hewitt Road Project area, and the project area did not raise any concerns for DHP. Tr. 7/8/10 at 36-37 (Upton); exh. CVPS-7597-TOU-12 at 3.

162. The transmission-line projects will have no direct effects on any historic structures, nor significantly alter their settings. The proposed transmission-line work will not have an adverse effect on any structures on, or eligible for, the State or National Register of Historic Places. Exhs. CVPS-7597-TOU-5 at 22, TOU-7, and TOU-12 at 3.

163. The existing Middlebury Lower and Weybridge substations are historic. The substations are part of the Middlebury Lower Hydroelectric and Weybridge Hydroelectric Projects regulated by FERC and are subject to Programmatic Agreements for managing historic properties among FERC, the Advisory Council on Historic Preservation, and the Vermont State Historic Preservation Office. Both facilities are included in Historic Property Management Plans prepared for the respective projects (FERC Nos. 2737 and 2731). DHP will provide comments concerning the proposed changes to FERC in consultation with CVPS and is in the process of reviewing a Memorandum of Agreement regarding the more substantive changes proposed for the Middlebury Lower Substation. No additional comments on the proposed substation changes will be submitted by DHP to the Board. Exh. CVPS-7597-TOU-12 at 2.

Discussion - Historical Resources

Criterion 8 of Act 250 sets forth a three-part analysis for evaluating the potential effects of a project upon historic sites: "(a) whether the Project site is or contains an historic site; (b) whether the Project will have an adverse effect on the historic site; and (c) whether any such adverse effect will be undue."[22] The following standards are employed to determine whether a project has an adverse and undue impact under Criterion 8:

> [i]n evaluating adverse effect on a site, it is central to determine whether a proposed project is in harmony or fits with the historic context of the site. Important guidelines in evaluating this fit include: (1) whether there will be physical destruction, damage, or alteration of those qualities which make the site historic, such as an existing structure, landscape, or setting; and (2) whether the proposed project will have other effects on the historic structure, landscape, or setting which are incongruous or incompatible with the site's historic qualities, including, but not limited to, such effects as isolation of an historic structure from its historic setting, new property uses, or new visual, audible or atmospheric elements. 1The 'undue' quality of an effect on an historic site can be judged in several different ways. A positive conclusion on any one of the following guidelines can lead to a determination that an adverse effect is undue:
>
> a. The failure of an applicant to take generally available mitigating steps which a reasonable person would take to preserve the character of the historic site.
>
> b. Interference on the part of the proposed project with the ability of the public to interpret or appreciate the historic qualities of the site.
>
> c. Cumulative effects on the historic qualities of the site by the various components of a proposed project which, when taken together, are so significant that they create an unacceptable impact.
>
> d. Violation of a clear, written community standard which is intended to preserve the historic qualities of the site.[23]

Based upon the evidence presented, I conclude that the Hewitt Road Project and the Middlebury Reliability Project will not have an adverse effect upon above-ground historic properties.

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22. Docket No. 6860, Order of 1/28/05 at 170.
23. *Id.*

Archeological Resources

164. NEARC and DHP assessed the Middlebury Reliability Project and the Hewitt Road Project for potential impacts to archaeological resources. In addition, for the portion of the new transmission line to be located within the existing VELCO right-of-way, CVPS was able to rely on previous studies conducted under the Northwest Reliability Project (Docket No. 6860). DHP reviewed these studies and concluded that no additional DHP investigations were required. Upton pf. Docket No. 7597 at 32-33; exh. CVPS-7597-TOU-12.

165. DHP conducted site visits to the project areas, including the Middlebury Lower and Weybridge substations, the proposed Middlebury to Weybridge reconductoring segment, the proposed new 46 kV segment from Weybridge to New Haven, and the Hewitt Road substation in Bristol. Exh. CVPS-7597-TOU-12.

166. NEARC's 2009 Archeological Phase IA survey included the entire 100-foot right-of-way for the proposed new transmission/distribution line, along with seven locations between the Middlebury Lower and Weybridge substations where poles will be replaced. The study determined twenty-three sites to be archeologically sensitive – four at pole-replacement sites and nineteen along the consolidated transmission/distribution right-of-way. Upton pf. Docket 7597 at 33; exhs. CVPS-7597-TOU-5, TOU-7, and TOU-12 at 3.

167. NEARC's Archeological Phase IB survey of the twenty-three sensitive locations revealed the presence of eight previously unknown Native American archeological sites, one (VT-AD-1512) on the reconductoring portion of the project, and the remaining seven along the route of the new 46 kV line in New Haven. Upton pf. Docket No. 7597 at 33; exhs. CVPS-7597-TOU-6 and TOU-12 at 2.

168. Based on Phase II field evaluation, NEARC and DHP concluded that two of the eight identified sites (VT-AD-1517 and VT-AD-1519) are not eligible for listing on the State or National Register of Historic Places and therefore no additional archeological work is required. The remaining six sites (VT-AD-1512, VT-AD-1513, VT-AD-1514, VT-AD-1515, VT-AD-1516, and VT-AD1518) are eligible for listing and require further mitigation during construction. Upton pf. Docket No. 7597 at 33-34; exhs. CVPS-7597-TOU-8 and TOU-12 at 2.

169. Required mitigation generally consists of a combination of avoidance, data-recovery excavation at specific project elements such as new poles and anchors within site areas, and the installation of protective matting along any access routes necessary within the sites to complete construction. Exh. CVPS-7597- TOU-12.

170. CVPS identified thirteen potential areas for off-corridor access; NEARC determined that five of the locations contained archeologically sensitive areas. CVPS subsequently identified alternatives for all five sensitive access routes, and will undertake appropriate archeological work, as determined by NEARC and DHP, should any of these routes be reconsidered for use. Exh. Joint-1; exh. CVPS- 7597-TOU-12.

171. There are no archeologically sensitive areas within the Hewitt Road Project area. Tr. 7/8/10 at 36-37 (Upton).

172. A previously unknown Native American site now designated as VT-AD-1533 in the VAI was found within the Middlebury Lower Substation's proposed footprint. Exh. CVPS-7597-TOU-12 at 2; Upton pf. Docket No. 7597 at 32–33; tr. 7/8/10 at 144–45 (Upton).

173. On May 4, 2010, DHP issued a letter determining that the Middlebury Reliability Project will not have an undue adverse effect upon historic sites or properties, if the following conditions are met:

> • CVPS will identify VT-AD-1512, VT-AD-1513, VT-AD-1514, VT-AD 1515, VT-AD-1516, VT-AD-1518, and the five archeologically sensitive segments of off-corridor access roads as not-to-be-disturbed archeological buffer zones on all relevant site plans.
>
> • Topsoil removal, grading, scraping, cutting, filling, stockpiling, logging or any other type of ground disturbance is prohibited within the buffer zones prior to the completion of all appropriate archeological studies. Agricultural cultivation is permissible in the currently cultivated portions of the buffer zones provided it is consistent with past practice.
>
> • Archeological studies in accordance with the April 30, 2010 Phase III Mitigation Scope of Work prepared by [NEARC] will be carried out by a qualified consulting archeologist in any portion of the archeologically sensitive access roads prior to use, or within any new project component.
>
> • Exclusionary fencing constructed of snow fencing or other structural barrier shall be erected around VT-AD-1512, VT-AD-1513, VT-AD1514, VT-AD-1515, VT-AD-1516, VT-AD-1518, and any other significant archeological site identified within the project area during all construction activity. All access

routes through a site area shall be similarly marked and all construction activity must occur on top of protective matting placed on the existing ground surface to prevent any ground disturbance.

• All archeological studies and assessments must be conducted by a qualified consulting archeologist and must follow [DHP's] Guidelines for Conducting Archeological Studies in Vermont. The permitee's archeological consultant must submit any scope of work to [DHP] for review and approval.

• Archeological sites within the project area will not be impacted until any necessary mitigation measures have been carried out. Mitigation may include but is not limited to further site evaluation, data recovery, redesign of one or more proposed project components, or specific conditions that may be imposed during construction, such as installation of construction barriers or protective matting, etc.

• Proposed mitigation measures will be discussed with and approved by [DHP] prior to implementation, and a copy of all mitigation proposals will be filed with the [Board]. The archeological studies will result in one or more final reports, as appropriate, that meet [DHP's] Guidelines for Conducting Archeological Studies in Vermont. Copies will be submitted both to [DHP] and to the PSB.

• CVPS's consultant shall conduct public outreach and education activities minimally consisting of the following: posting of multiple "exhibits" on the Vermont Archeology Museum; an in-field open house; and one public presentation synthesizing the archeological results.

• Any new or revised project plans should be submitted to [DHP] for review as soon as they become available.

Exh. CVPS-7597-TOU-12 at 4-5.

Discussion - Archeological Resources

Based upon the evidence presented, I conclude that the Hewitt Road Project and the Middlebury Reliability Project will not have an adverse effect upon archeological resources.

(iii) Rare and Irreplaceable Natural Areas

174. There are no known rare or irreplaceable natural areas at the Hewitt Road Project area or within the Middlebury Reliability Project areas. Upton pf. Docket No. 7597 at 12 & 24.

(o) Necessary Wildlife Habitat and Endangered Species

[10 V.S.A. § 6086(a)(8)(A)]

175. The Projects will not destroy or significantly imperil any necessary wildlife habitat or endangered species. This finding is supported by findings 176 through 182, below.

176. The Hewitt Road Project is located on an existing substation site. There are no known endangered species or areas of necessary wildlife habitat in the area of the Hewitt Road Project. Upton pf. Docket No. 7596 at 12.

177. The Middlebury Reliability Project has been reviewed and approved by the Vermont Nongame and Natural Heritage Program and the Vermont Department of Fish and Wildlife ("DFW"). Upton pf. Docket No. 7597 at 34.

178. The Middlebury Reliability Project will take place entirely within existing transmission and distribution corridors and at existing substation sites, with limited potential for impacts on necessary wildlife habitat or endangered species. Upton pf. Docket No. 7597 at 34–35.

179. The Indiana bat, a state-listed endangered species, has been observed in all four project towns, with Bristol having been identified as providing high-quality roosting and foraging habitat. Therefore, all tree-clearing work must be sensitive to potential impacts on Indiana bats. Upton pf. Docket No. 7597 at 35.

180. Based on a site visit conducted May 7, 2010, DFW concluded that the clearing associated with the expansion of the Hewitt Road substation will not have a significant impact on Indiana bats or Indiana bat habitat. Upton supp. pf. Docket No. 7597 at 5.

181. Because the numbers of Indiana bats appear to be in decline, even the modest clearing associated with the widening of the existing distribution line in the area between proposed poles 43 and 52 in New Haven warrants mitigation. DFW prefers on-site mitigation, and asked that CVPS work with DFW to develop appropriate transmission-line management guidelines. CVPS has agreed to develop management strategies in the Project area and potentially on other parts of its subtransmission system. Upton pf. Docket No. 7597 at 35; Upton supp. pf. Docket No. 7597 at 3–4.

182. CVPS and DFW have agreed on a framework for project-specific vegetation-management techniques as a mitigation tool for potential impacts to Indiana bat habitat. In

addition, CVPS and DFW have agreed to hold further discussions in an attempt to identify more general management strategies that could be applied elsewhere on CVPS's system. DFW has requested that these discussions, which will also include VELCO, take place during the winter of 2010-2011, with the goal of adopting mutually acceptable best management practices by June 30, 2011. Upton supp. pf. Docket No. 7597 at 4–5; exh. Joint-1, Attachment B (CVPS Indiana Bat Habitat Management and Mitigation Plan).

Discussion

I recommend that any CPG issued for the Middlebury Reliability Project include a condition requiring that CVPS submit to the Board and parties, and implement, project-specific plans approved by DFW for management of Indiana bat habitat. I further recommend that the Board require CVPS to continue its collaboration with DFW and VELCO and make all good-faith efforts to adopt best management practices by June 30, 2011.

(p) Development Affecting Public Investments

[10 V.S.A. § 6086(a)(9)(K)]

183. The Projects will not unnecessarily or unreasonably endanger the public or quasi-public investments in any governmental public utility facilities, services, or lands, or materially jeopardize or interfere with the function, efficiency, or safety of the public's use or enjoyment of or access to such facilities, services, or lands. Upton pf. Docket No. 7596 at 12; Upton pf. Docket No. 7597 at 36.

184. The transmission line crosses several public roads. Any necessary traffic control at the crossing of U.S. Route 7 will be done only with the approval of the Vermont Agency of Transportation. Upton pf. Docket No. 7597 at 36.

(6) Least-Cost Integrated Resource Plan

[30 V.S.A. § 248(b)(6)]

185. The Projects are consistent with the principles of least-cost planning. This finding is supported by findings 186 through 189, below.

186. The Projects are consistent with the principles for resource selection in accordance with CVPS's approved IRP. Kirby pf. Docket 7597 at 9-10; Jones pf. Docket 7596 at 6.

187. The IRP states that "CVPS's T&D [transmission and distribution] planning analysis has increasingly focused on studies designed to improve system operation under contingency situations," and that "The Company in conjunction with other utilities will conduct preliminary NTA analysis for study areas where VELCO's Long Range Plan has identified deficiencies." Kirby pf. Docket 7597 at 10.

188. The Middlebury Reliability Project will improve reliability for planned and unplanned contingencies and will cost-effectively address a deficiency identified in the VELCO Long Range Plan. Kirby pf. Docket 7597 at 10; exh. CVPS-7597-LRK-2.

189. The Hewitt Road Project is consistent with the Asset Management Strategy ("AMS") discussed in the IRP. The Hewitt Road Project replaces an old transformer, breakers and associated equipment which are all parts of the at-risk aging infrastructure described in the AMS. The Project improves both reliability and efficiency, consistent with the IRP. Jones pf. Docket 7596 at 6.

(7) Compliance with Electric Energy Plan

[30 V.S.A. § 248(b)(7)]

190. The Projects comply with the *Vermont Electric Plan* (the "Plan"). This finding is supported by findings 191 through 193, below.

191. The Plan requires that the transmission system be efficient, adequate, reliable, secure, sustainable, affordable, safe, environmentally sound, and consistent with other state policies, and that it encourage economic vitality. The Projects strike the proper balance between all of these objectives. Kirby pf. Docket 7597 at 13-18; Jones pf. Docket 7596 at 6.

192. By cost-effectively improving the long-term system stability and reliability of the CVPS subtransmission system for residential and commercial customers in the Middlebury area, while avoiding and minimizing the environmental impacts of construction and maintenance, the Projects meet the Plan's goals. Kirby pf. Docket 7597 at 13-18; Jones pf. Docket 7596 at 1-7; exh. LRK-2 Docket No. 7597.

193. The Department filed a determination on July 23, 2010, that the Projects are consistent with the *Vermont Electric Plan*, in accordance with 30 V.S.A. § 202(f).

(8) Outstanding Resource Waters

[30 V.S.A. § 248(b)(8)]

194. The Projects are not located on or near any Outstanding Resource Waters. Exh. Joint-1 at ¶ 8; Upton pf. Docket No. 7596 at 13; Upton pf. Docket No. 7597 at 36.

(9) Waste-to-Energy Facility

[30 V.S.A. § 248(b)(9)]

195. The Projects do not involve construction of a waste-to-energy facility. Therefore, this criterion is inapplicable.

(10) Existing or Planned Transmission Facilities

[30 V.S.A. § 248(b)(10)]

196. The Projects will be served economically by existing or planned transmission facilities without undue adverse impact on Vermont utilities or customers. This finding is supported by findings 197 through 198, below.

197. The Middlebury Reliability Project improves system reliability and flexibility in a cost-effective manner, represents a long-term solution that facilitates deliberative system planning, and creates opportunities for transmission and non-transmission alternatives in future planning efforts. Kirby pf. Docket 7597 at 12-13; exh. CVPS-7597-LRK-2.

198. The Hewitt Road Project will improve CVPS's ability to provide electric service and to accommodate future load growth on the existing system. Jones pf. Docket 7596 at 7.

V. GENERAL GOOD OF THE STATE

[Section 248(a)]

Pursuant to Section 248(a)(2), no company or person may begin site preparation for, or commence construction of, a transmission facility unless the Board first finds that such

generation will promote the general good of the state and issues a certificate of public good to that effect. Section 248(b) requires that the Board find that any generation project meet specific criteria spelled out in the statute in order to issue a CPG. The Projects' compliance with those criteria is addressed in the findings and discussion set forth above. In addition, pursuant to Section 248(a), the Board must also determine that the project promotes the general good of the state. The Board has previously explained:

> In essence the factors enumerated in subsection (b) are "conditions precedent to the ultimate conclusion that a proposal is consistent with the general good of the state, rather than being full proof of that conclusion. In other words, they are necessary, but they may not be sufficient.[24]

In the present proceeding, the parties have not presented, nor have I ascertained, any reasons why the Middlebury Projects are not consistent with the general good of the state. Instead, as the above findings and discussion demonstrate, the Projects are necessary to address reliability concerns in the Middlebury area, are the most cost-effective solutions to those concerns, and present no undue adverse impacts with the conditions that I recommend.

I, therefore, conclude that the Projects will promote the general good of the state.

VI. CONCLUSION

For the reasons set forth above, I conclude that the proposed transmission upgrades will promote the general good of the state, and recommend that the Projects be approved, with the conditions included in the attached proposed Order and Certificates of Public Good.

This Proposal for Decision has been served on all parties to this proceeding in accordance with 3 V.S.A. § 811.

Dated at Montpelier, Vermont, this 13th day of August, 2010.

s/ Kurt Janson
Kurt Janson, Esq.
Hearing Officer

24. Docket 5330, Order of 10/12/90 at 46.

VII. BOARD DISCUSSION

Parties' Comments on Proposal for Decision

On August 6, 2010, CVPS filed a letter stating that it "accepts the conditions proposed by the Hearing Officer, offers no substantive comments on the Proposal for Decision, and waives the opportunity for oral argument before the Board." No other party filed comments on the Proposal for Decision.

In its letter CVPS also notes that there is a factual error in the first full paragraph on page 51 of the Proposal for Decision.[25] That paragraph currently reads:

> Near the Weybridge substation, CVPS implemented several design changes, including undergrounding of certain line segments, using lower-profile transmission structures near Otter Creek and removing an existing circuit tie switch.

CVPS explains that there are no plans for undergrounding any line segments, and thus the paragraph should instead read:

> Near the Weybridge substation, CVPS implemented several design changes, including using lower-profile transmission structures near Otter Creek and removing an existing circuit tie switch.

We adopt CVPS's proposed change to the first full paragraph on page 51 of the Proposal for Decision.

Other Issues

Two other issues in the Proposal for Decision merit further attention. First, we fully endorse and adopt the Hearing Officer's recommendation to deny, without prejudice, CVPS's motion for a protective order. While we recognize that the Company has certain obligations to seek to protect CEII, it must provide a better demonstration if it wishes to keep confidential information that is in the evidentiary record, especially information that apparently remains open to public inspection in the context of another, earlier Board proceeding.

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25. CVPS credits the Department for finding the error.

Second, Finding 56 notes that an option to connect VELCO's Middlebury substation to hydro-electric units owned by Vermont Marble Power Division of OMYA, Inc. was considered but not pursued because a cost-sharing agreement could not be reached. While we do not know whether, upon further examination, this particular option would have proven to be beneficial and cost-effective, we are disappointed that further consideration was abandoned due to the failure of the involved Vermont utilities to reach agreement on allocating costs. We expect Vermont's utilities to make every reasonable effort to cooperate so that collaborative projects of potential benefit to them and their ratepayers may be fully evaluated and, when justified, implemented.

VIII. ORDER

IT IS HEREBY ORDERED, ADJUDGED, AND DECREED by the Public Service Board of the State of Vermont that:

1. The findings and conclusions of the Hearing Officer are adopted, except as modified above.

2. The proposed Projects, in accordance with the evidence and plans submitted in this proceeding, will promote the general good of the State of Vermont in accordance with 30 V.S.A. § 248, and certificates of public good to that effect shall be issued with the conditions set forth below:

(a) Construction, operation, and maintenance of the proposed Projects shall be in accordance with the evidence and plans submitted in this proceeding, and the findings and requirements set forth in this Order.

(b) Prior to commencing construction, the Petitioners shall obtain all necessary permits and approvals. Construction, operation, and maintenance of the proposed Projects shall be in accordance with such permits and approvals, and with all other applicable regulations, including those of the Agency of Natural Resources.

(c) Construction activities shall be allowed only between the hours of 7:00 a.m. and 7:00 p.m. on weekdays, and between 9:00 a.m. and 7:00 p.m. on weekends and holidays.

(d) Central Vermont Public Service Corporation ("CVPS") shall install a surface liner and temporary berm structure as an oil-containment measure for the temporary substation at the Hewitt Road substation site. Prior to commencement of construction for the temporary substation, CVPS shall file, for Board approval, a proposed plan for the oil-containment system. Parties shall have one week, from the date this plan is filed with the Board, to comment on the plan.

(e) At the Hewitt Road substation, CVPS shall install a continuous line of cedars along the northerly substation fence, as shown on the approved site plan; the trees shall be at least six feet in height upon installation and no more than six feet apart.

(f) With respect to the Middlebury Reliability Project, CVPS shall file a site plan, for Board approval, showing the details of its proposed mitigation plantings in the area around pole 56. In addition, if the Board does not approve in Docket No. 6860 the revision to that docket's mitigation requirement, then CVPS shall file, for Board approval, alternative mitigation plans for the area around pole 56. CVPS shall install vegetative screening in accordance with its approved plan.

(g) With respect to the Middlebury Reliability Project, at the Bingham Farm property in New Haven, CVPS shall (i) plant two blue spruce trees and a line of apple trees or other compatible species on the property, with the purpose of screening the adjacent home and farmstand from a pole structure carrying both electrical conductors and a set of distribution voltage regulators, (ii) attempt to relocate an existing distribution anchor to a location more convenient for lawn maintenance; and (iii) limit construction activities, when the farmstand is operational, to the hours before 3 p.m.

(h) With respect to the Middlebury Reliability Project, upon completion of construction in the areas of poles 56 and the Brigham Farm property, CVPS shall meet with the affected landowners and the Vermont Department of Public Service ("Department") to determine the exact placement of all trees, and submit a proposed final plan to the Board for approval. Upon approval of the plan for the placement of trees by the Board, CVPS shall act expeditiously to have such trees planted.

(i) With respect to the Middlebury Reliability Project, upon completion of construction, CVPS shall remove the existing distribution circuit tie switch adjacent to Pole 4 on the new 46 kV line.

(j) With respect to the Middlebury Reliability Project, CVPS shall submit to the Board and parties, and implement, project-specific plans approved by the Department of Fish and Wildlife ("DFW") for management of Indiana bat habitat. In addition, CVPS shall make all good-faith efforts to develop and adopt, in cooperation with the DFW and Vermont Electric Power company, Inc. ("VELCO"), a set of Best Management Practices for transmission line maintenance in identified areas of Indiana bat habitat in Vermont, on or before June 30, 2011.

(k) With respect to the Middlebury Reliability Project, CVPS shall identify VT-AD-1512, VT-AD-1513, VT-AD-1514, VT-AD-1515, VT-AD-1516, VT-AD-1518, and the five archeologically sensitive segments of off-corridor access roads as not-to-be-disturbed archeological buffer zones on all relevant site plans.

(l) With respect to the Middlebury Reliability Project, topsoil removal, grading, scraping, cutting, filling, stockpiling, logging or any other type of ground disturbance is prohibited within the archeological buffer zones prior to the completion of all appropriate archeological studies. Agricultural cultivation is permissible in the currently cultivated portions of the buffer zones provided it is consistent with past practice.

(m) With respect to the Middlebury Reliability Project, archeological studies in accordance with the April 30, 2010, Phase III Mitigation Scope of Work prepared by the Northeast Archeology Research Center (NEARC) will be carried out by a qualified consulting archeologist in any portion of the archeologically sensitive access roads prior to use, or within any new project component.

(n) With respect to the Middlebury Reliability Project, exclusionary fencing constructed of snow fencing or other structural barrier shall be erected around VT-AD-1512, VT-AD-1513, VT-AD-1514, VT-AD-1515, VT-AD-1516, VTAD-1518, and any other significant archeological site identified within the project area during all construction activity. All access routes through a site area shall be similarly marked and

all construction activity must occur on top of protective matting placed on the existing ground surface to prevent any ground disturbance.

(o) With respect to the Middlebury Reliability Project, all archeological studies and assessments must be conducted by a qualified consulting archeologist and must follow the Division of Historic Preservation's ("DHP's") Guidelines for Conducting Archeological Studies in Vermont. The permitee's archeological consultant must submit any scope of work to the DHP for review and approval.

(p) With respect to the Middlebury Reliability Project, archeological sites within the project area shall not be impacted until any necessary mitigation measures have been carried out. Mitigation may include but is not limited to further site evaluation, data recovery, redesign of one or more proposed project components, or specific conditions that may be imposed during construction, such as installation of construction barriers or protective matting.

(q) With respect to the Middlebury Reliability Project, proposed archeological mitigation measures shall be discussed with and approved by DHP prior to implementation, and a copy of all mitigation proposals shall be filed with the Board. The archeological studies shall result in one or more final reports, as appropriate, that meet DHP's Guidelines for Conducting Archeological Studies in Vermont. Copies shall be submitted both to DHP and to the Board.

(r) With respect to the Middlebury Reliability Project, CVPS's archeological consultant shall conduct public outreach and education activities minimally consisting of the following: posting of multiple "exhibits" on the Vermont Archeology Museum; an in-field open house; and one public presentation synthesizing the archeological results.

(s) With respect to the Middlebury Reliability Project, any new or revised project plans shall be submitted to DHP for review as soon as they become available.

(t) The Board retains jurisdiction to review aesthetic mitigation measures post-construction and to require additional mitigation measures as the Board determines to be appropriate.

3. CVPS's motions for a protective order covering Exhibits CVPS-7597-LRK-2, JRF-21 and JRF-23 are denied without prejudice. The redacted information in those exhibits shall remain under seal pending the filing of a renewed or modified motion by CVPS. CVPS may file a renewed or modified motion within 30 days of the date of this Order. If a renewed or modified motion is not filed by that deadline, the subject exhibits shall be made part of the pubic record in this proceeding.

Dated at Montpelier, Vermont, this 20th day of August, 2010.

s/ James Volz)
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s/ David C. Coen)
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)
s/ John D. Burke)

PUBLIC SERVICE BOARD OF VERMONT

OFFICE OF THE CLERK

FILED: August 20, 2010

ATTEST: s/ Susan M. Hudson
Clerk of the Board

NOTICE TO READERS: This decision is subject to revision of technical errors. Readers are requested to notify the Clerk of the Board (by e-mail, telephone, or in writing) of any apparent errors, in order that any necessary corrections may be made. (E-mail address: psb.clerk@state.vt.us)

Appeal of this decision to the Supreme Court of Vermont must be filed with the Clerk of the Board within thirty days. Appeal will not stay the effect of this Order, absent further Order by this Board or appropriate action by the Supreme Court of Vermont. Motions for reconsideration or stay, if any, must be filed with the Clerk of the Board within ten days of the date of this decision and order.